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RATE RESEARCH

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120 WEST ADAMS STREET - - - CHICAGO

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Rate Research

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Rate Research

Vol. 5

CHICAGO, APRIL 1, 1914

No. 1

For statement of facts and opinions contained in papers abstracted herein, the Association does not hold itself responsible

RATES

PALMER, MASSACHUSETTS

720—Rate Schedules.

The CENTRAL MASSACHUSETTS ELECTRIC COMPANY, Palmer, Massachusetts, has reduced its rates for electric lighting from 17 cents to 16 cents per kilowatt-hour. The following is a statement of the new rate, which becomes effective April 1st:

Rate.

16 cents gross or 15 cents net per kilowatt-hour.

Discount.

The difference between the gross and net rates constitutes a discount for prompt payment.

COURT DECISIONS

OKLAHOMA

129.4—Refunds.

PIONEER TELEPHONE AND TELEGRAPH CO. v. STATE. Petition by the State of Oklahoma to Recover the Refund of Excess Charges. From an Order of the Corporation Commission for Petition, the Company Appeals. Decision of the SUPREME COURT OF OKLAHOMA Affirming the Decision, and Denying a Rehearing. January 13, 1914. On Rehearing, February 24, 1914. 138 Pacific 1033.

On July 28, 1909, the Company was adjudged guilty of contempt, in that it increased its rates without approval of the Corporation Commission, as required by an order of the Commission issued October 12, 1908. The Company contended that the franchise ordinance fixed the rates to be charged and that the Commission was without authority to interfere.

In Pioneer Telephone & Telegraph Co. v. State, supra, it was held that said municipality, by virtue of said ordinance granting said franchise, did not have power to fix rates to be charged by appellant for use of its telephones in said city, and affirmed the order adjudging appellant guilty of contempt. Appellant in this proceeding seeks to challenge the validity of the order of the Commission made on October 12, 1908, in that it was made by said Commission without authority, and further that it was void.

EDITORIAL NOTE.—All indented matter is direct quotation.

The State, through its proper law officer, filed a petition before the Corporation Commission, seeking to recover from appellant the refund of excess charges which were collected by appellant from its subscribers in Oklahoma City after the said order of October 12, 1908, was entered. Appellant entered its appearance and contested the granting of said relief by the Commission. Judgment was entered by it against appellant for the amount of the excess charges as shown and indicated by appellant under its sworn report to said Commission, to wit, \$60,057.20. Appellant made no contention as to the amount of the excess charges, but controverted the power of the Commission to grant the relief (1) on the ground that it was without authority; (2) that such action could not be maintained in the name of the State; and (3) that the act of February 10, 1913, entitled "An act conferring authority upon the Corporation Commission to adjust controversies between parties growing out of refunds for public service; to require all refunds to be turned over to the Commission; to determine the amount of refund and to whom due; and declaring an emergency" (Laws 1913, c. 10)—was repugnant, not only to the State, but also the Federal Constitution.

The Court judges all of these contentions to be without merit.

224—Rate Regulation.

That the Commission had such power and the order was not void is now *res adjudicata*. *Pioneer Telephone & Telegraph Co. v. State*, *supra*. Even if such was not the case the Commission had power to make said order. Section 18, art. 9 (section 234, par. 3, Williams' Anno. Ed.) of the Constitution of this State.

231—Companies' Procedure.

That said order was made without investigation as to the rates charged and was therefore arbitrary and unreasonable, that would not make the order void, but voidable, and such question could only be raised by an appeal or other means of direct proceeding, and not in a collateral attack, as is here sought to be made; the appellant having had the notice provided for by article 9, sec. 18, of the Constitution of this State, *supra*; section 24, art. 9 (section 242, Williams' Anno. Ed.), of the Constitution of this State.

Further contention that in this action, before the Corporation Commission, appellant was entitled to plead and prove that the rates were, so fixed by the order of October 12, 1908, unjust and unreasonable and confiscatory, and for that reason the State was not entitled to prevail in this action to recover the refunds, such defense is not permissible in this proceeding. Such rates having been fixed and not having been challenged directly by appeal or otherwise, such question in this action is collateral.

Three remedies were available to the appellant by which the validity of said order might be challenged: (1) By appeal as provided in section 20 of article 9 (section 238, Williams Anno. Ed.) of the Constitution; (2) by application made directly to the Commission to set aside order (section 18 of article 9 [section 234, Williams' Anno.

Ed.] of the constitution; and (3) by an action in equity to restrain its enforcement. As a matter of practice the first two remedies should be sought before the last remedy is resorted to. *Prentiss v. Atlantic Coast Line*, 211 U. S. 210, 29 Sup. Ct. 67, 53 L Ed. 150.

ARIZONA

224—Rate Regulation.

STATE V. TUCSON GAS, ELECTRIC LIGHT & POWER CO. Suit Alleging that, by Statute, a Minimum Charge is Illegal in Arizona. Decision of the ARIZONA SUPREME COURT, Holding the Statute in Question to be Unconstitutional. February 18, 1914. 138 Pacific 781.

The law in question (Laws 1912 (Sp. Sess.) c. 52, sec. 7) requires public service corporations to sell water, electric energy, or illuminating gas by meter measurement, and prohibits them from charging for a greater amount than actually furnished.

The question is, may a public service corporation establish and collect a minimum rate, notwithstanding this legislative expression to the contrary?

It is the contention of appellee that this legislative act is repugnant to the constitution of Arizona, and void in so far as it attempts to fix rates to be charged for the products named.

The provisions of the Constitution relied on as forbidding this piece of legislation are found in Article 15 thereof.

Article 15, Section 3 of the Constitution gives the Corporation Commission full power to fix the classifications, rates, and charges of public service corporations, except that cities and towns may be authorized by the Legislature to exercise supervision within their respective limits.

If the Constitution had intended that the legislative department should have unrestricted power over the Corporation Commission, it has failed to so indicate, but, on the contrary, has definitely limited, and restricted its power to take from the Commission the prescribing of classifications and fixing rates and charges in incorporated cities and towns only. . . . The power granted to the Corporation Commission by Section 3 of the Constitution to supervise, regulate and control public service corporations extends to and covers all such corporations doing business in the state. However, this power may be given over to incorporated cities and towns by proper legislative action, either by the Legislature or the people. If the law-making power of the state can transfer this power of regulation and control from the Corporation Commission to cities and towns, only by virtue of the direct grant of authority to do so, as contained in the proviso, it would seem to follow that the Legislature is powerless to prescribe classifications, rates, charges, rules, regulations, and orders by which public service corporations shall be governed. . . .

The Commission shall not only have the full power to act in the premises, but, having acted, it only may amend and repeal its action.

As is hereafter shown, we think this must be true, or else there would exist no paramount authority over the matter of regulating and supervising public service corporations. It is a necessary rule of construction in order to avoid a conflict of authority and preserve uniformity of regulation and supervision.

Section 6 of Article 15 of the Constitution expressly authorizes the Legislature to enlarge the powers and extend the duties of the Corporation Commission.

The Constitution, having in express terms authorized the Legislature to enlarge the powers and extend the duties of the Commission, impliedly forbids the Legislature from exercising any of the power vested in the Commission (such as fixing rates and charges) that would have the effect of lessening or decreasing the Commission's powers.

There is a detailed analysis of various sections of the law.

The Corporation Commission, therefore, has been vested by Section 3, *supra*, with full power, with the command to exercise it: (1) To prescribe just and reasonable classifications to be used; (2) just and reasonable rates and charges to be made and collected; (3) reasonable rules, regulations, and orders by which public service corporations "shall be governed in the transaction of business within the state."

200—Public Service Regulation.

Whatever the reasons and influences that may have prompted the framers of the Constitution to endow the Corporation Commission with such extraordinary and unusual power, it is a well-known fact that there has long existed a deep-rooted dissatisfaction with the results obtained through the Legislatures of the county in their efforts to adjust and regulate rates and classifications between the general public and public service corporations. While the power to control and regulate those matters by the law-making body has been frequently upheld, the lack of full information on the part of the Legislator, and inadequacy of time and means of investigation, have tended to foster litigation, with the result of suspending and often of defeating the object aimed at, rather than to secure just and reasonable classifications, rates, charges, and regulations. The unwisdom and impracticability of imposing upon the courts, in the first instance, this kind of litigation has frequently been adverted to by the courts. One court used this language: "It is utterly impossible for a court to hear all cases similar to this, which requires from one to three months to hear the evidence, after the issues are formed. If this Court were to do nothing else, it could not personally hear all such cases. * * * Some of the states, like New York, Massachusetts and Wisconsin, have State Commissions of competent men, who give public hearings, and who do nothing behind doors, nor in secrecy—a commission with no member interested as a taxpayer of the city and with no member subject to influences other than the ascertaining of the truth and the facts. Rates are thus fixed with

which most fair-minded people are ready to acquiesce. It is strange that we have no such legislation and no such commission in Iowa." *Des Moines Water Co. v. City of Des Moines* (C. C.) 192 Fed. 193, 195. The same court in *Des Moines Gas Co. v. City of Des Moines* (D. C.) 199 Fed. 204, 205, again said: "Much of this kind of litigation, and practically all of the expense, would be avoided, if Iowa, like so many of the other, including some neighboring states, had an impartial and non-resident commission or tribunal, with power to fix these rates at a public hearing, and all interested parties present, with the tribunal selecting its own engineers, auditors, and accountants."

220—General Powers of Commission.

The framers of the Constitution were fully informed as to the chaotic conditions existing. They knew the evil, and sought to correct it in the fundamental law of the state by constituting the Corporation Commission a body empowered and authorized by that instrument to exercise not only legislative but the judicial, administrative, and executive functions of the government. While it is not so named, it is, in fact, another department of government, with powers and duties as well defined as any branch of the government, and where it is given exclusive power it is supreme. Its exclusive field may not be invaded by either the courts, the legislative or executive.

MISSOURI

226—Service.

STATE ex inf. BARKER, Atty. Gen., ex rel. *KANSAS CITY v. KANSAS CITY GAS CO.* Application for a Writ of Mandamus to Compel the Kansas City Gas Co. to Furnish Gas of Sufficient Pressure. Decision of the MISSOURI SUPREME COURT Adjudging that the Public Service Commission has Jurisdiction in the Case. December 24, 1913. Rehearing Denied, February 10, 1914. 163 Southwestern 854.

This is a suit to compel the Kansas City Gas Co., a natural gas company, holding a thirty-year franchise, to furnish sufficient pressure during the winter months. The Court holds that the Public Utilities Commission is the proper tribunal to investigate the matter, because

200—Public Service Regulation.

That Act (the Public Utilities Act) is an elaborate law bottomed on the police power. It evidences a public policy hammered out on the anvil of public discussion. It apparently recognizes certain generally accepted economic principles and conditions, to-wit: That a public utility (like gas, water, car service, etc.) is in its nature a monopoly; that competition is inadequate to protect the public, and, if it exists, is likely to become an economic waste; that state regulation takes the place of and stands for competition; that such regulation, to command respect from patron or utility owner, must be in the name of the overlord, the state, and, to be effective, must possess the power of intelligent visitation and the plenary supervision of every business feature to be finally (however invisible) reflected in rates and quality of service. It recognizes that every expenditure,

every dereliction, every share of stock, or bond, or note issued as surety is finally reflected in rates and quality of service to the public. . .

Its constitutionality is not assailed in whole or in part.

There is a complete outline of the provisions of the law.

The complaint made and the remedy invoked in this proceeding, taken in connection with the Public Utilities Act we have outlined, raises the question heretofore stated, viz.: Whether we should assume jurisdiction, and issue an absolute writ on this original proceeding in the first instance? As to that we say: We are of opinion that to do so would be to approach that new and important statute with a frosty and questioning judicial countenance; would be to run counter to the wise public policy evidenced by that statute; would be, either to take respondent corporation from under the burden and benefits of that statute, or to hazard handicapping the powers and discretions of the Utilities Commission hereafter in the premises, should it assume to act; would be to say that such statute did not provide an efficient and adequate remedy for the grievances complained of, if found to exist; would be to assume that this Court is better equipped with ways and means to make the investigation necessary to any just solution of the problem presented than is the Utilities Commission; would be to substitute our absolute writ of mandamus, inflexible, unreasoning, and illy suited to compelling a general course of conduct and a "long series of continuous acts," for the flexible, speedy, and sensible remedies prescribed by the Public Utilities Act, to be applied from time to time as circumstances alter, and fair dealing demands.

We are not willing to take any such position. The Commission is better equipped with experts, technical knowledge, and other efficient aids to a neutral and full investigation than would be any commissioner appointed by the Court. . .

Our conclusion is sustained by the reasoning and judgment of those courts dealing with a like Public Utilities Act under the conditions.

Nebraska Tel. Co. v. State, 55 Neb., 627, 76 N. W. 171, 45 L. R. A. 113; State ex rel. v. A. C. L. R. R. Co. 53 Fla., 651, 44 South. 231, 13 L. R. A. (N. S.) 320, 12 Ann. Cas. 359; People ex rel. v. Interurban Ry. Co., 177 N. Y. 296, 69 N. E. 596; State ex rel. v. Duluth Ry. Co. (1913) 153 Wis. 650, 142 N. W. 184, Vide, arguendo, Wickwire Steel Co. v. N. Y. Cent., etc., R. R. Co., 104 C. C. A. 504, 181 Fed. 316; A. T. & S. F. Ry. Co. v. Lumber Co., 31 Okl. 661, 122 Pac. 139; State ex rel. v. Court, 67 Wash. 37, 120 Pac. 861, Ann. Cas. 1913D, 78.

WASHINGTON

810—Municipal or Local Regulation of Utilities.

SEATTLE ELECTRIC CO. v. CITY OF SEATTLE et al. Suit to Enjoin an Ordinance Regulating the Operation of Electric Street Cars. Decision of the SUPREME COURT OF WASHINGTON, Holding that the City Has No Power to Regulate. February 20, 1914. 138 Pacific 892.

The City of Seattle passed an ordinance in October, 1911, providing for the prevention of the overcrowding of cars, and for their operation

in accordance with a schedule to be filed in the office of the superintendent of public utilities of the city. The city was enjoined from enforcing the ordinance, and here appeals. The Court affirms the previous decision.

For the purposes of the present decision it will be assumed that the city council had the power and authority to pass the ordinance in question, unless such power has been withdrawn from it by the provisions of what is known as the public service commission law, passed at the legislative session for the year 1911. Laws of 1911, c. 117, p. 538.

The pertinent provisions of the Public Service Laws are quoted—namely those providing that the term “common carrier” shall include street railroads; that the term “transportation of persons” includes any service in connection with the carriage of persons, the term “service” being used in its broadest sense; that whenever the Public Service Commission shall find that the rules of any common carrier as to transportation are unjust or insufficient, it shall determine reasonable and just rules, and that a complaint may be made by any individuals or body politic, or municipal corporation.

The ultimate question to be determined then is whether the public service commission law revoked the power of the city to legislate upon the subject-matter of the ordinance at the time the law took effect, or does the city retain such power until the Public Service Commission shall issue an order covering the same subject-matter.

STATE EX REL. WEBSTER V. SUPERIOR COURT (67 Wash. 37, 120 Pac. 861, Ann. Cas. 1913 D, 78) is cited.

It is apparent that the Court there plainly held that the right of the city to exercise the police power over a particular subject-matter ceases when the state acts upon the same subject-matter, unless there is room for the exercise of concurrent jurisdiction. That a state acts when a law passed by the Legislature takes effect can hardly be doubted.

It is plain that the state must be held to have spoken upon a given subject-matter when its legislative will becomes effective. From that time the policy of the state is declared. But if there is room for the exercise of concurrent jurisdiction, the act of the State Legislature does not revoke the right of the city to exercise the police power.

The inquiry then must be directed to the question as to whether the Legislature intended that the city should exercise its police power over the subject-matter of the ordinance after the Public Service Commission law took effect and prior to the time that the Public Service Commission might issue an order. The Public Service Commission law of this state was substantially taken from the Wisconsin law. This fact is conceded by both the appellants and the respondent. The Wisconsin law contained a provision that the act should not apply to street and electric railroads engaged solely in the transportation of passengers within the limits of cities.

In the law of this state we find no such provision. The terms of the law as shown by the excerpts already quoted are most comprehensive. The appellant concedes that these provisions invest the Public Service Commission with the right to control street railways by the issuance of an order after a hearing, and also the right of the city to invoke the aid of the Commission in regulating and controlling street railways operating within its limits. Had the Legislature intended that the city might exercise jurisdiction until the Commission should issue an order, it seems strange that, with the Wisconsin law before it, with a provision therein exempting certain street and electric railroads from its operation, some qualification would not have been inserted in the law of this state.

Again, if it was the legislative will that jurisdiction should be retained by the city, the insertion in the law of the right of the city to invoke the aid of the Commission would be entirely useless. To so construe the law that the city might exercise the power of regulation until the Public Service Commission should act would be of no substantial benefit to the city, and would give rise to conflict of authority and inevitable confusion. If this were the meaning of the law, the city, after it had gone to the trouble and expense of acquiring the necessary data and passing a regulating ordinance, might have its work nullified whenever, to use the language of the statute, complaint might be made to the Commission by "any person, corporation, chamber of commerce, board of trade, or any commercial, mercantile, agricultural or manufacturing society, or any body politic or municipal corporation," and the Commission should issue an order. And the public utilities company, if it should comply with the ordinance and incur expenses necessarily incident thereto, might have its work undone in like manner.

Considering the entire statute, and especially the excerpts quoted therefrom, it seems plain to us that it was the legislative intent that the power and authority to regulate public utilities was vested in the Public Service Commission from and after the time the law took effect, and that when the law became effective it revoked the power of the city to legislate upon the subject-matter covered by the ordinance.

112.5—Ordinance Rates.

Two cases are called to our attention, by counsel for the appellant which it is claimed sustain his view. They are *Charleston Consol. Ry. & L. Co. v. City Council of Charleston*, 92 S. C. 127, 75 S. E. 390, and *City of Manitowoc v. Manitowoc & N. T. Co.*, 145 Wis. 13, 129 N. W. 925.

Both of these cases are founded upon the proposition that a contract between a city and a public utility is not abrogated when a public utilities law goes into effect giving a commission the right to fix rates, but that the contract rate remains until such time as the Commission provides for a different rate.

The distinction between those cases and the present case is that there was a definite contract in each case, while here the City of Seattle did not retain by contract the right to exercise the power which it sought to exercise by the ordinance, but claims the right to exercise it under the police power of the city. While the passage of a public utilities law does not abrogate contracts until the Commission has fixed a different rate, it does not follow that the passage of a public utilities law may not withdraw from the city the right to exercise the police power from and after the date it became effective. This distinction was recognized in the Manitowoc Case, where it was said: "If, as is contended by counsel for the respondent, no contract was entered into, and we were dealing with the ordinance as a legislative enactment pure and simple, and not as part and parcel of a contract, there might be good reason for the claim that it is superseded by Chapter 362, Laws 1905, without any affirmative action on the part of the Railroad Commission."

It has been stated by respectable authority that the grant of power to a municipal corporation does not permit it to adopt by-laws which infringe the spirit or are repugnant to the policy of the state as declared in its general legislation. In 2 Dillon, Municipal Corporations (5th Ed.) Sec. 601, it is said: "The rule that a municipal corporation can pass no ordinance which conflicts with its charter, or any general statute in force and applicable to the corporation, has been before stated. Not only so, but it cannot, in virtue of its incidental power to pass by-laws, or under any general grant of that authority, adopt by-laws which infringe the spirit or are repugnant to the policy of the state as declared in its general legislation * * *."

REFERENCES

RATES

624—Power Factor.

ECONOMIES OF POWER-FACTOR ADJUSTMENT, by H. B. DWIGHT. Article and Editorial, *Electrical World*, 3 $\frac{1}{4}$ pages, March 28, 1914, p. 708, and p. 682.

The above article discusses methods of securing the best power-factor conditions for both energy-supply companies and energy users. It is suggested that the best solution of the difficulty is in persuading the customer to install synchronous motors, instead of induction motors, whenever possible. Two general methods are suggested for influencing the choice of the customer in the installation of the proper kind of machinery. One is to insert an extra meter on his premises, so connected as to measure the reactive energy consumed, while the other meter measures the active energy in the usual way. He is then to be charged for the extra reactive energy at a rate, say, one-fourth of the regular rate for active energy. The other method is to offer a bonus for each kilovolt-ampere of synchronous motor machinery installed.

The editorial sums up the article briefly, and concludes that it is probable that the equity of the case could best be met by the first method. That is to say, if a customer desires to install a machine that absorbs reactive energy to the disadvantage of the system and of all connected therewith, he should pay a proper

price for the luxury, in proportion to the amount of reactive energy he consumes monthly. On the other hand, in view of the difficulty of explaining the nature of the trouble to the customer, the matter being essentially of a technical character, and also in view of the difficulty of establishing an authorized rate for reactive energy, it seems likely that the second method, in some of its many possible forms, is likely to be more generally practicable.

600—Rate Differentials.

ELECTRIC CENTRAL STATION RATES, by R. D. DEWOLF. *Engineering Magazine*, March, 1914. $1\frac{1}{2}$ page, p. 959.

This outlines the basic facts which make variable rates for electricity necessary. It is stated that it is logical to base the charges, not upon the class of service, but upon those costs which are common to all, and which may be divided into three general classes: First—A customer charge, including those elements which are involved in handling each customer, such as metering, general office expense, etc.; Second—A demand or capacity charge, including a fixed charge on the investment required, the cost of keeping this capacity ready to supply power at the time the customer demands it, necessary repairs, etc.; Third—A kilowatt-hour charge, or the actual cost of producing the power, consisting mainly of the cost of coal actually required to generate 1 kilowatt-hour.

600—Rate Differentials.

THE RELATION OF "OUT-OF-POCKET COST" TO WATER RATE MAKING, WITH AN ILLUSTRATIVE EXAMPLE, by MORRIS KNOWLES and MAURICE R. SCHARFF. Read before the Illinois Water Supply Association, 1914. *Engineering and Contracting*, 2 pages, March 18, 1914, p. 336.

This states that the perfect system of rates cannot be determined a priori; it must come, rather as the result of evolution, of gradual improvement, as the outcome of human experience. It is, however, possible, with an understanding of such principles as have already been worked out, and using the best judgment we can bring to bear, to attain results far preferable to those based on the belief that it is useless to compute rates at all. For the former method is bound to reach by experience a closer and closer approximation to the truth; while the latter can never advance a single step. There is a consideration of the factors entering into the making of scientific water rates. With reference to rate differentials, it is said that one proper reason for differential treatment of consumers is to lower the cost to other consumers by retaining custom which would otherwise be lost. It is stated that it is to the advantage of all consumers that large long hour, high load-factor consumers be retained. Differential treatment of them does not constitute discrimination, so long as it will result in advantage and saving to other consumers. Such concessions in rates, however, must not be greater than actually necessary to meet the competition of other sources of supply. And in any case, they must not be so great as to increase instead of decreasing the income to be collected from other consumers.

INVESTMENT AND RETURN

360—Depreciation.

THE RATE OF DEPRECIATION. *Railway Age Gazette*, $\frac{3}{4}$ page, March 27, 1914, p. 727.

This comments on the renewed interest in the question of charges for depreciation, foreshadowed by the Supreme Court decision in the Kansas City Southern case (see 4 RATE RESEARCH 277) and in the Interstate Commerce Commission's condemnation of the Chicago, Milwaukee and St. Paul's charge of 1 per cent on its equipment. It is said that the American practice of not only maintaining but of bettering property out of earnings in prosperous years and tiding over lean years by living on the accumulated fat of the previous years is so deeply ingrained

in most American railroad managers that they are only now beginning to realize that a different policy will have to be pursued when they have got not only to justify themselves to their stockholders, but explain the whys and wherefores to the Interstate Commerce Commission and the public at large. Despite the hardships that it may work on a good many roads for a time, an ample charge for depreciation is not only theoretically right, but, under present circumstances, the soundest provision that can be made to safeguard the future unless indeed the Commission were to rule that all new equipment must be paid for out of earnings.

360—Depreciation.

MAINTENANCE AND DEPRECIATION. Editorial, *Electric Railway Journal*, March 21, 1914, p. 620.

This states that one of the most striking facts apparent to the close observer of electric railway reports is the great variation in maintenance and depreciation charges made by different companies operating under more or less equal conditions. The policies of the Wisconsin Commission, the Interstate Commerce Commission, and the Montana, New Jersey, Indiana, Maryland and New York (1st D.) Commissions are cited. It is said that these examples are sufficient to show the lack of concerted action on the part of public service commissions in accounting for repairs, renewals and replacements—in short, for “maintenance” and “depreciation.” It is suggested that the abstruseness of the subject would be greatly lessened if the accounting technique in regard thereto were standardized.

300—Investment and Return.

MCGREGOR-NOE HARDWARE COMPANY, et al., Complainants vs. SPRINGFIELD GAS AND ELECTRIC COMPANY and SPRINGFIELD TRACTION COMPANY, Defendants. BRIEF AND ARGUMENT ON BEHALF OF DEFENDANTS. 445 pages.

This is the company's brief in the Springfield-Missouri electric rates case now pending before the Missouri Commission. Reference was made to this case in 4 RATE RESEARCH 159.

PUBLIC SERVICE REGULATION

200—Public Service Regulation.

THE FUNCTION OF COMMISSIONS. *Public Service Regulation*, $\frac{3}{4}$ page, March, 1914, page 135.

This is a quotation from an address by Commissioner Yates of the Illinois Commission before the National Independent Telephone Association. It is said there is a three-fold interest involved in the handling of the product of utilities. There is the company furnishing, the consumer using, and the state. The introduction of this new factor into the regulation of utility business is not to be feared. It destroys nothing. It preserves all that is good. It allows full co-operation. With reference to the Commissions attitude toward its work, Mr. Yates said: “In behalf of my colleagues, my fellow-commissioners, it ought to be said that the commission aspires to be absolutely fair in all its endeavor; and to take up, as the governor has insisted, the various questions that come before it, in a purely business attitude and non-partisan manner, seeking to adjust all things that come before it on a sound and economic basis.

We appreciate the responsibility; and we seek and solicit, from all sides, both information and help to the end that the governor and the people of this state may feel that the opportunities which they have placed in our hands have been handled, not unwisely, but in the interest of all the people, and of all honest business, thus starting Illinois in the race for first rank in this great field.”

226.2—Extension of Service.

LINE EXTENSIONS—SPRING BUSINESS AND APPLIANCE EXPLOITATION, by A. G. RAKESTRAW. *Electrical Engineer*, 2 pages, March, 1914, p. 135.

In discussing extensions this comments on the lack of uniformity now prevalent in the matter, and on the investigation now being made by the Wisconsin Commission. It is said that each line extension should be made profitable in itself, with perhaps two exceptions. In rapidly growing territory where there is a good chance to develop a profitable field, it is not only permissible but wise to make liberal extensions. Furthermore, to avoid appearance of discrimination it is often policy to make all extensions asked for without charge within certain prescribed limits, such as within the borders of a municipality, or other civil division. Public service commissions have often held that adequate accommodations to the citizens of any section within which a franchise is granted, involves giving service to every one within such municipality, no matter where they may be located. In general, there are three ways in which the customer may bear part or all of the construction cost. First, by payment outright, either in cash or monthly payments. Second, by guaranteeing a sufficient amount of business to meet the cost out of the resulting profits on service. Third, by means of a rental charge to continue as long as the customer makes use of the line. Probably the simplest and most accurate plan is to rent the line to the customer on a basis such that the rental will cover fixed charges and upkeep, and to sell current at the same rate, and terms as if the customer were at the power house door. Then in case business should spring up along the line, the rental should be adjusted and when the customers become so numerous as to make the fixed charges small in proportion to the total business handled, the rental charge would naturally be dropped altogether.

268—Public Utility Laws.

NEW HAMPSHIRE UTILITIES LAWS. *Public Service Regulation*, 4 pages, March, 1914, p. 171.

This is a digest of all new legislation affecting the relations of the Commission to railway and public utility service.

268—Public Service Laws.

THE ILLINOIS PUBLIC UTILITIES LAW AND ITS APPLICATION TO OPERATING TELEPHONE COMPANIES, by O. F. BERRY. Address delivered before the Illinois Independent Telephone Association, 1914.

This advocates protection from competition, and state regulation of public utilities. There is a detailed analysis of the provisions of the Illinois Utilities Act which apply to telephone companies. It is said that the Act is the most far reaching in the powers granted to the Commission, the most drastic in its requirements and excessive in its penalties for violation of any of the utility laws passed in recent years. The Commission has power to regulate the rates to be charged, the connections to be made, the character and class of service, the further issue of bonds and stocks; to fix the value of the plant, the rate of return due the stockholder on his investment and the amount that shall be set aside for depreciation and also by order to prevent unnecessary duplication of plants or lines. Confidence in the Utilities Commission appointed, is expressed.

MUNICIPALITIES

830—Public Ownership.

ANNUAL REPORT OF THE DIRECTORS OF THE AMERICAN TELEPHONE AND TELEGRAPH COMPANY to the Stockholders for the Year Ending December 31, 1913. Pamphlet, 68 pages.

This contains a full analysis of the question of government ownership; and an

analysis of the post office and its organization with view to a consideration of its adaptability to take over the telephone and telegraph. The difference in the service given by the Bell system and any publicly owned system is pointed out. It is said that the policy of the Bell System is that the value of a telephone service is in direct proportion to its "universality" and "dependability;" that is, to the certainty of reaching promptly by telephone the greatest number of people. This policy, which has been the strength of the Bell System and the cause of whatever supremacy in the telephone field it has, is now being made the strongest argument for government ownership and operation, ignoring the fact that the Bell System has extended or popularized its service to an extent far beyond that of any government system in the world. It is pointed out that all monopolies should be regulated, and that government ownership would be an unregulated monopoly. From all wrongs of privately owned utilities, appeals may be taken to state and national commissions and to municipal and legislative bodies; from the wrongs of publicly owned utilities administered through the dominant political party, no effective appeal is possible. There are fundamental economic laws which make it impossible for either publicly or privately owned utilities to furnish service without being paid from some source what it costs.

830—Public Ownership.

GOVERNMENT OWNERSHIP AND OPERATION. Editorial, *Electric Railway Journal*, March 21, 1914, p. 621.

This comments on Theodore N. Vail's discussion of government ownership and operation in the Annual Report of the American Telephone and Telegraph Company. It is said that any government report upon government operations that does not disclose wasteful and unscientific methods is rarer than Halley's comet, and while in theory there is no reason why government operation should not be as economical as private operation, in actual performance it is impossible to overcome the effect of the political favoritism, dilatory action and finished mediocrity that exist in our governmental departments.

The crux of the whole question of government ownership and operation in our country is this, that the narrow margin existing between economy and waste cannot be traversed properly without a responsible organization with individual initiative, watchfulness and permanency of interest. Successful operation requires superior methods, expert executives, heavy responsibility and undisputed directive authority—attributes that cannot be found under governmental ownership in a country where, as James Bryce says, "there are imperfect powers of control over the administrative departments and the nation does not always know how or where to fix responsibility for misfeasance or neglect, no one acting under the full sense of direct accountability." It is asserted that our government is far better qualified to perform the service of regulation—to make judicial review, with purpose of conserving and protecting the interests of all. Commissions of high standing would be a greater protection to public interests against private exactions than government ownership with its inevitable lack of economy.

830—Public Ownership.

MUNICIPAL OWNERSHIP OF PUBLIC UTILITIES, by ARTHUR WILLIAMS. An Address Delivered before the Finance Forum of the Y. M. C. A., New York, March 23, 1914. Pamphlet, 30 pages.

This comments on the popular misconception with regard to municipal ownership, i. e. the fact that the average non-property owning citizen seems to entertain the conviction, consciously or subconsciously, that his enjoyment of the various activities of the municipality in which he lives are paid for, largely, if not entirely, by others. There is a review of the reasons underlying the greater efficiency and economy of private as compared to public ownership. It is asserted that instead of public ownership and operation the safe and economic method should be private ownership and operation accompanied by public regulation. It is said that it is to be greatly hoped that our country, in its National, State and Municipal policies, will not adopt European methods which have been found to be mostly destructive of the best in public and private life, but rather will continue

a course in which our great utility industries will be absolutely divorced from politics; that they will continue to give the largest incentive to individual and collective advancement; that our people may secure at lowest cost the best which science and invention have developed and placed at our service for bettering conditions in human life.

820—State Regulation of Municipal Utilities.

REGULATION BY COMPETITORS. Editorial, *Journal of Electricity, Power and Gas*, March 21, 1914, p. 255.

This comments on the recent announcement of the dissolution of the United States Express Co., because of competition from the government parcels post system combined with enforced reductions in rates by the Interstate Commerce Commission, notwithstanding a steady decline in its earnings. Attention is called to the fact that regulation by the people combined with competition from the same source comes perilously close to making it impossible for other than the people to engage in whatever is profitable business. The risk is too great and capital may be forced either to find other fields or to hide in the long stocking. Such is the effect of too much regulation. The conditions necessitating the action taken by the company exist in degree on the Pacific Coast where in several cities, the power which controls or regulates the rates of public utilities is or may be in direct competition, in the form of municipal ownership, with these same public utility corporations. This is wrong in principle and apparently disastrous in practice. It should be changed. With even a measure of success or justice, competition regulated by one of the competitors, seems impossible.

One, perhaps satisfactory solution of this problem, would be to have all public utilities including those municipally owned and those private corporations within cities, all controlled by the state public service commissions.

GENERAL

132—Protection From Competition.

PROTECTING MONOPOLY, by JOHN M. ESHLEMAN. *The California Outlook*, 3 pages, March 21, 1914, p. 6.

This is a reply to a Hearst editorial, which implied that the California Commission in refusing to allow competition in the Oro Electric Corporation case, was going against its judgment, and was the victim of a "joker" in the law; i. e., the convenience and necessity clause. The article asserts the belief of the Commission in the protection of natural monopolies from competition, and explains in detail the attitude of the Commission in the matter of competition.

Mr. Eschleman says in part:

"I say without fear of successful contradiction that there is no difference among political economists on this question, and I say with equal emphasis that there is no difference among political economists and political thinkers as regards the method of regulation which should apply to such agencies. . . . And indeed a little thought on the part of the most superficial will lead to the conclusion that where an agency is of such a character as for instance an electrical company, that competition with it requires duplication of property necessary to serve the public, such an agency can, if unmolested, give better service at lower rates than it is possible for it to give if it be required to divide its business with a competing agency. . . . Consumers too often lose sight of the fact that they always pay the bill, and if there is twice as much property upon which an earning must be made the consumers necessarily must pay a greater amount for the service. . . . The potential competition doctrine of the California Railroad Commission does not protect any natural monopoly in its field unless that natural monopoly is voluntarily according that service to which the public is entitled. But it does protect the honestly managed and efficient public utility which voluntarily does the best it can, which is always better than it can do if it is required to divide its business with a rival."

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RATE RESEARCH



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CHICAGO, APRIL 8, 1914

No. 2

For statement of facts and opinions contained in papers abstracted herein, the Association does not hold itself responsible

COURT DECISIONS

NEW YORK

3—Investment and Return.

PEOPLE EX REL. KINGS COUNTY LIGHTING COMPANY V. NEW YORK PUBLIC SERVICE COMMISSION (1ST D.). Decision of the NEW YORK COURT OF APPEALS, Affirming in part, the Decision of the Appellate Division of the Supreme Court for the First Department and Remitting the Proceedings to the Commission. March 24, 1914.

The decisions of the Commission and of the Appellate Division on the valuation in the Kings County Lighting Company rates case is given in 3 RATE RESEARCH 164. The case was taken by the Commission to the Court of Appeals and the decision of the higher court on the disputed questions is here given.

315.1—Going Value.

It is now generally recognized that "going value," as distinct from "good will," is to be considered in valuing the property of a public service corporation either for the purpose of condemnation or rate making, but there is a wide divergence of view as to how it is to be considered. The commission in this case says it was taken into account in valuing the plant as a "going" and not as a "defunct or static" concern and that it was also considered in fixing the fair rate of return. The Appellate Division says that there is no proof of the latter fact in the record. Thus the first question certified requires us to decide whether "going value" is to be appraised as a distinct item, or whether it is sufficient to regard it as something vague and indefinable to be given some consideration but not enough to be estimated. The valuation of the physical property was determined by ascertaining the cost of reproduction less accrued depreciation. Preliminary and development expenses prior to operation were included, but no allowance was made for the cost of developing the business. By that method the plant was valued in a sense as a "going concern." In other words "scrap" values were not taken, but to say that that sufficiently allows for "going value" is the same as to say that "going value" is not to be taken into account. The problem is to determine what is fair to the public and the company. The public is entitled to be served at reasonable rates and the company is entitled to a fair return of its investment on the value of the property used by it in the public service. (Smith v. Ames, 169 U. S.

466; *San Diego Land Co. v. National City*, 174 U. S. 739; *San Diego Land & Town Co. v. Jasper*, 189 U. S. 439; *Minnesota Rate Cases* 230 U. S. 252.) It would have been entitled to a return on the valuation adopted by the commission, if it had no customers, but was just ready to begin business, whereas it had a plant in operation with an established business, which every one knows takes time, labor and money to build up. . . .

It takes time to put a new enterprise of any magnitude on its feet, after the construction work has been finished. Mistakes of construction have to be corrected. Substitutions have to be made. Economies have to be studied. Experiments have to be made, which sometimes turn out to be useless. An organization has to be perfected. Business has to be solicited and advertised for. In the case of a gas company, gratuitous work has to be done, such as selling appliances at less than a fair profit and demonstrating new devices to induce consumption of gas and to educate the public up to the maximum point of consumption. None of these things is reflected in the value of the physical property, unless, of course, exchange value be taken, which is not admissible in a rate case. The Company starts out with the "bare bones" of the plant, to borrow Lurton's phrase in the *Omaha Water Works Case* (*supra*) [218 U. S. 180]. By the expenditure of time, labor and money, it co-ordinates those bones into an efficient working organism and acquires a paying business. The proper and reasonable cost of doing that, whether included in operating expenses or not, is as much a part of the investment of the company as the cost of the physical property.

The investors in a new enterprise have to be satisfied as a rule with meagre or no returns, while the business is being built up. In a business subject only to the natural laws of trade, they expect to make up for the early lean years by large profits later. In a business, classified among public callings, the rate-making power must allow for the losses during the lean years, or their rate will be confiscatory and of course will drive investors from the field. In the former class, the value of the established business is a part of the "good will" and may be determined by taking a given number of years' purchase of the profits, or exchange value may be considered. In the latter case, a different rule must be adopted. . . .

If a deficiency in the fair return in the early years was due to losses or expenditures which were reasonably necessary and proper in developing efficiency and economy of operation and in establishing a business, it should be made up by the returns in later years. If there was a fair return from the start, the corporation has received all it was entitled to, irrespective of how much of the earnings may have been diverted to the building of the business.

Of course, a reasonable need for the service from the start and reasonably good management are assumed. While, within reasonable limits, service may be provided for anticipated needs, a company should not construct a plant in a wilderness and, after a city has been

built around it, expect to recoup its losses while waiting, nor should it expect to recoup losses from bad management. I do not include in the latter mere mistakes or errors in judgment which are almost inevitable in the early stages of any business. The fair return is to be computed on the actual investment, not on an over-issue of securities, and the failure to pay dividends to the investors must be due to the causes under consideration, not to an accumulation of a surplus or to expenditures for permanent additions or betterments, which are included in the appraisal of the physical property; in other words, the actual net earnings are to be taken. Making proper allowance for the matters just considered, and perhaps for others which do not now occur to me, I define "going value" for rate purposes as involved in this case, to be the amount equal to the deficiency of net earning below a fair return on the actual investment due solely to the time and expenditures reasonably necessary and proper to the development of the business and property to its present stage, and not comprised in the valuation of the physical property.

In regard to determining a definite allowance for going value, where actual data as to early losses are not available, the court says:

There would appear to be as good ground for admitting the opinion of a qualified expert on such a subject as on the cost to reproduce the physical property. Of course, the commission was not bound by that evidence. It had, in addition, the experience of the relator and its predecessor as to payment of dividends, the amount of capitalization of both, and the value of the physical property in its present condition, determined as above stated. With nothing opposed to those facts and the opinion evidence it was not justified in ignoring the evidence of "going value" or of merely attaching some inappreciable importance to it. (See *Bonbright v. Geary*, 210 Fed. Rep. 44, 54, 56). . . .

312.9—Paving Over Mains.

In determining the cost of reproduction, the commission allowed \$12,717 as the cost of restoring the pavement as it existed when the mains and service pipes were laid in the streets. The relator claimed an allowance of at least \$200,000 for the cost of restoring pavements subsequently laid, on the theory that that cost would have to be incurred if the mains were to be laid to-day. . . . The question has a double aspect. What will be fair to the public, as well as to the relator? (*Smith v. Ames*, *supra*). Should the public pay more for gas simply because improved pavements have been laid at public expense? The case is not at all parallel to the so-called unearned increment of land. That the company owns. It does not own the pavements, and the laying of them does not add to its investment or increase the cost to it of producing gas. The cost of reproduction, less accrued depreciation rule seems to be the one generally employed in rate cases. But it is merely a rule of convenience, and must be applied with reason. On the one hand it

should not be so applied as to deprive the corporation of a fair return at all times on the reasonable, proper and necessary investment made by it to serve the public, and on the other hand it should not be so applied as to give the corporation a return on improvements made at public expense which in no way increase the cost to it of performing that service. . . .

319—Land.

We agree with the Appellate Division that annual increase in the value of land is not income. Of course, under the rule of the Ames case (*supra*), land might become so valuable as to require its use for other purposes and as to make a rate based on it unfair to the public. The present is not such a case. . . .

OREGON

224.5—Rates Fixed by Contract.

PORTLAND RY. LIGHT & POWER CO. v. CITY OF PORTLAND et al. Suit to Set Aside an Ordinance Regulating Street Railway Rates. Decision of the DISTRICT COURT, DISTRICT OF OREGON, Enjoining the Ordinance Rates. January 12, 1914. 210 Federal 667.

The suit is brought to enjoin the enforcement of an ordinance of the city, adopted November 5, 1913, requiring street railway companies within the city engaged in the transportation of passengers to sell six tickets for 25 cents, and to provide conductors with such tickets for sale whenever demanded by a passenger, upon payment of the price specified. Upon the filing of the bill an order was made requiring the defendant to appear and show cause why a preliminary injunction should not issue. In obedience to this order the defendant appeared and filed a motion to dismiss the complaint on the ground that the court was without jurisdiction and because it does not state facts sufficient to constitute a cause of suit. . . .

112.5—Ordinance Rates.

This court held, in *Portland Ry. Light & Power Co. v. City of Portland*, 201 Fed. 119, that the provision in the franchise of the plaintiff concerning the rates to be charged by it does not constitute a contract suspending the governmental power of regulation during the life of the franchise, and I take it, therefore, plaintiff is not entitled to relief on this ground. . . .

131—Protection from Confiscation.

I doubt whether the complaint as amended states facts sufficient to shown that the rates as fixed by the city will be confiscatory. The value of plaintiff's property devoted to street railway purposes within the city is stated in the complaint, but it is silent as to the income derived therefrom or the operating expenses. The only averment in that connection is that from the present revenues the plaintiff is earning only a certain per cent. on its investment. This is but a con-

clusion, and under the recent decisions of the Supreme Court in the Minnesota and kindred rate cases is not sufficient. . . .

224.5—Rates Fixed by Ordinance.

The remaining question, and the vital one, as I take it, is whether section 81 of the city charter so far as it undertakes to vest the municipality with power to fix rates to be charged by public utility companies operating within the city is valid. It was adopted by the legal voters of the city in May, 1913, as one of several amendments to the city charter. At that time a general law of the state was in force known as the Public Utility Act (Laws 1911, c. 279), which vested the Railroad Commission with the power and jurisdiction to supervise and regulate every public utility in the state, and gave to such commission the exclusive authority to investigate any rates charged by public utilities and if found unreasonable to fix and order substituted therefor such rates as shall be just and reasonable. The law provides that every public utility in the state must file with the commission within a time fixed by it schedules of its rates, and that no charges shall be made therein except as in the law provided. It is also made an offense, punishable as such, for any public utility to charge or collect a greater or less compensation than specified in such schedule until the same is changed as provided by law, or to accept or receive any rebate, commission, or discrimination whereby any service shall be rendered at a less rate than named in the published schedule and tariff in force as provided in the act. The purpose of these provisions was to prevent unjust discrimination and to require public utilities to afford the same service to all patrons under the same circumstances. The plaintiff, in compliance with this law, filed its schedules or rates with the commission prior to the adoption of the amendment to the city charter and prior to the enactment of the ordinance in question. The rates stated in these schedules are materially different from those prescribed by the city. It is apparent, therefore, that both the Utility Act and the city ordinance cannot be enforced. If the plaintiff obeys the Utility Act and charges the rates made lawful thereby, it will be violating the city ordinance and be liable to punishment therefor, for the charges provided in the ordinance are less than those fixed in the schedule filed with the Public Utility Commission. If, on the other hand it obeys the city ordinance and charges the rate provided therein, it will be violating the Utility Act for a like reason. It is clear therefore that both cannot stand. One or the other must give way. There cannot be two public bodies existing at the same time with original jurisdiction to prescribe and fix the only lawful rates to be charged by a public utility. *California-Oregon Power Co. v. City of Grants Pass* (D. C.) 203 Fed. 173; and *Seattle Electric Co. v. City of Seattle* (D. C.) 206 Fed. 955.

Now, the right to regulate rates of public service corporations is a governmental power vested in the state in its sovereign capacity. It may be exercised by the state directly or through a commission appointed by it, or it may delegate such power to a municipality. But I

do not understand that a municipality may assume to itself such power without the consent of the state where there is a general law on the subject emanating from the entire state. It is true that under the Oregon system the legal voters of every city or town are given power to enact and amend their municipal charter, subject to the Constitution and criminal laws of the state. But this does not authorize the people of a city to amend its charter so as to confer upon the municipality powers beyond what are purely municipal or inconsistent with a general law of the state constitutionally enacted. *Straw v. Harris*, 54 Or. 424, 103 Pac. 777, and *Kiernan v. Portland*, 57 Or. 454, 111 Pac. 379, 112 Pac. 402, 37 L. R. A. (N. S.) 339. It was so held by the Supreme Court of the state in *Riggs v. City of Grants Pass*, 134 Pac. 776, where a city attempted to amend its charter so as to authorize its council to incur an indebtedness for the building of railroads. The regulation of fares to be charged by public service corporations is not primarily a municipal matter, but is a sovereign right belonging to the state in its sovereign capacity. All authority over the subject must emanate from the state. The effect of the amendment to the charter of the city of Portland is an attempt to ignore the state authority and to assume sovereign rights superior and contrary to the expressed will of the state as manifested in its legislation. If the amendment is valid and takes the public utilities within the city of Portland out of the operation of the Public Utility Act and the jurisdiction of the commission created by it, then every municipality in the state may amend its charter with like effect, and the Public Utility Act will become a useless and emasculated piece of legislation, the will of the entire people as expressed therein be practically ignored, and the people of a part of the state become greater than the whole. The Public Utility Act was not only passed by the Legislature but approved by a majority of the people on a referendum vote. It is therefore the expressed will of the sovereign power of the state concerning a subject over which it has jurisdiction, and it cannot be amended or abrogated by the people of a particular or given locality. The purpose was to provide a uniform system throughout the entire state for the control and regulation of public utilities and fixing the rates to be charged by them, and to create a tribunal for that purpose. It is true the Public Utility Act does recognize the authority of municipalities over public service corporations within its boundaries for certain purposes, but not in the matter of regulating or prescribing rates or fares. That power is vested alone in the Public Service Commission. Now, Portland, or the people of Portland, are not without remedy if the rate charged by the plaintiff is unreasonable or unjust. They have a full and complete remedy by application to the tribunal created by the state for the purpose of determining such questions, and which is provided with the necessary machinery and expert assistants to deal with the subject intelligently. I take it therefore that the preliminary injunction should issue; the form thereof and the amount of the bond to be determined hereafter.

COMMISSION DECISIONS**NEW JERSEY****139.9—Deposits.**

Investigation as to the Reasonableness of Rules of the EASTON GAS WORKS and the EASTERN PENNSYLVANIA POWER COMPANY OF NEW JERSEY Exacting a Deposit in Advance of Supplying Service. Decision of the NEW JERSEY BOARD OF PUBLIC UTILITY COMMISSIONERS, Holding that Such a Rule is Reasonable and Specifying Certain Changes in the Companies' Rule. February 20, 1914.

Both companies have in effect rules requiring new customers to make a deposit of five dollars to secure payment of bills for service to be rendered.

Why should the gas or electric company be permitted to require such a deposit, where the ordinary tradesman does not?

The fundamental reason seems to be this. A public utility is bound within its legal competence and up to the limit of its physical equipment to afford service to all who apply conformably to the reasonable requirements imposed by the utility. The public utility cannot at its option refuse to render service. It is thus debarred from exercising the choice which the ordinary merchant may exercise of declining to serve would-be customers. As an offset to this peculiar obligation, and to protect public utilities from bad debts which might otherwise be unavoidable, public utilities are allowed in some States by statute to require a deposit or advance payment. In some States water rents or other utility services are made a lien upon the property served. This is the statutory provision in this State as regards water rent where the municipality serves the consumer. These considerations requiring the utility to serve all applicants seem to establish the reasonableness of a rule which a utility may impose requiring of its customers advance deposits to secure bills for service to be rendered. . .

Question was raised as to whether the practice of requiring new customers to make such deposits and exempting earlier customers therefrom is unjustly discriminatory.

The Board is not able to find that the imposition of the rule on those newly subscribing for service is unduly or unjustly discriminatory, at least until demonstration of their promptness and regularity in payment entitles them to ask the return of the advance deposit and to the same extension of credit as is now extended to old subscribers not in arrears. . .

So long as the rule does not appear to work an undue or unjust discrimination it will not be set aside as unduly or unjustly discriminatory or preferential. The issue may fairly be raised, however, whether, after adequate demonstration on the part of the consumer of his financial reliability, a public utility avowedly according credit to reliable customers may not be justly required to refund an advance

deposit, or apply the same in liquidation of bills due. There seems little warrant in equity for the indefinite retention of such deposits, even though interest thereon be allowed. It savors altogether too much of a forced loan. . . .

In regard to the amount of the deposit the Board says it should be sufficient to cover the cost of one month's consumption and the cost to the company of disconnection of the service in case the customer fails to pay within the time allowed by the companies' rules. (In case the monthly bill is not paid within the first ten days of the following month, the companies issue warning of discontinuance within ten days thereafter.) The five dollar deposit is held to be reasonable except that in the case of gas consumers on prepayment meters the companies are asked to make an abatement to two dollars.

INDIANA

132—Protection from Competition.

PETITION FOR CERTIFICATE OF CONVENIENCE AND NECESSITY, Authorizing a Second Telephone Utility in Francesville, Indiana. Decision of the INDIANA PUBLIC SERVICE COMMISSION, Dismissing the Application. December 31, 1913.

The petitioners allege that the telephone service in Francesville is inadequate and it appeared that much dissatisfaction existed among the patrons. The established company is rebuilding its system and installing improved equipment and the Commission held that the new company should not be admitted.

It is difficult to see how another telephone plant or exchange could operate under better or more favorable conditions in the same locality than the conditions under which the present plant operates, and while much discontent and dissatisfaction exists, another telephone system would only increase the dissatisfaction and discontent and would perhaps complicate the system of wiring throughout the town and the country.

This commission has the authority to require a telephone company to perform properly the services which it should perform, and this authority extends to the present company the same that it would apply to a new company. It also has authority to control and regulate the rates, tolls and charges of the company now operating at Francesville, and we believe, under this authority, better accommodations can be furnished by one company than will be furnished by two companies operating in the same town the size of Francesville. . . .

OHIO

224.5—Rates Fixed by Contract.

THE NEW OTTAWA COUNTY TELEPHONE COMPANY AT PORT CLINTON, OHIO, Inquiry as to Company's Right to Increase Rates Fixed by

Ordinance. Opinion of Attorney for the OHIO PUBLIC UTILITIES COMMISSION. Dated December 29, 1913.

The right of the telephone company to raise rates fixed by ordinance before the passage of the public utilities law, was decided in the case of Macklin vs. The Home Telephone Company, I. C. C. N. S. 373, which was affirmed by the Supreme Court of Ohio in 70 O. S. 507. The decision in this case was as follows:

"In Ohio a municipality has no valuable right to confer upon a telephone company nothing that the law will regard as a consideration, either good or valuable, to support a contract between the municipality and such a company, fixing a rate of charge for telephone service; and if a rate stipulated is to be enforced, it must be on some theory of estoppel rather than of contract.

The Home Telephone Company secured, by a ruse, the passage of an unwilling city council of an ordinance fixing the mode of its occupation of the streets. The article consisted in the incorporation into the ordinance of an invalid provision fixing the rate of charge for residence telephones at \$12.00 per year. Subsequently the company repudiated its agreement as to price, and refused to install its plant, unless eight hundred contracts were secured at \$18.00 per year.

Held: That in view of the fact that the company secured no more than its legal rights and the city parted with nothing of value, the company is not estopped from maintaining a charge of \$18.00 per year, and injunction against such charge will not lie."

The Attorney for the Commission says:

There is no question that the provision in the ordinance fixing the rates that the Ottawa Telephone Company should charge for service was of no effect.

In conclusion the attorney holds that the telephone company is not bound by the prices fixed in the ordinance, but is bound by the schedule of rates filed with the Commission which cannot be changed except by action as required in the Public Utilities Law.

VERMONT

3—Investment and Return.

Investigation of the Rates Charged by the ADDISON & PANTON TELEPHONE AND TELEGRAPH COMPANY et al. Decision of the VERMONT PUBLIC SERVICE COMMISSION, Determining Rates to be Charged by Telephone Companies Operating Within the State. March 14, 1914.

An investigation was made of the rates for telephone service in the state and a reduction was ordered in the rates of the New England Telephone and Telegraph Company and subsidiary companies and the Springfield Local Telephone Company. The decision is concerned chiefly with an examination in detail of the valuations submitted by the companies and

there are few holdings capable of general application in either the majority or dissenting opinions.

The corporate history of the companies is largely a history of severe competition with ultimate agreement or consolidation.

315.1—Going Value.

In certain financial statements of the companies which were filed at the hearings there was incorporated an item for going concern value which item was not carried upon the books of the companies as an asset. All the subsidiary companies, with the possible exception of the Vermont Company, were organized for the purpose of suppressing competition and large sums were used by these companies in the purchase of competing plants at high valuations and some of these plants when acquired were scrapped. The New England Company has been active in the suppression of competition and in financing the subsidiary companies for that purpose. As a result of these activities and expenditures . . . the New England Company and the subsidiaries monopolize the territory in which they operate within the State, and are as much of a monopoly, although on a smaller scale, as is the Consolidated Gas Company in the City of New York.

The Commission is of the opinion that the items of going concern value above referred to should be disregarded. . . .

335—Issues of Stocks and Bonds.

The decision contains an account of the security issues of the Passumpsic Telephone Company. It is alleged that these transactions, although authorized by the Public Service Commission, were extravagant and ill advised placing excessive financial burdens upon the Passumpsic Company, and "in order to meet the same, rates are required which are in excess of what would have been required if these transactions had not taken place."

The majority of the present Commission cannot but feel that the authorization of the stock issues for the purposes for which they were used should never have been permitted, but as the State has sanctioned these issues and the State's sanction has been acted upon, the majority cannot see it way clear to do anything that will change or avoid the former action of the State.

340—Rate of Return.

The Commission stated that in no instance would the rate of return fall below 6% under the rates prescribed in the order.

The dissenting opinion says:

I am also unable to agree with my associates that six per cent is a fair rate of return on investments in a public utility of this character. It is my opinion, based on evidence introduced at the hearing . . . that the rate of return should be based upon the investment represented by the physical valuation of the property, and should bear some

relation to the rate of interest allowed by law, as that is the legislative standard by which the just return for borrowed money is fixed. In ordinary transactions a fixed reduction is established which does not vary with the circumstances of the borrower. But in the case of a public service corporation whose revenues are subject to fluctuation, some latitude must be allowed so that the deficits of one year may be made good from the larger profits of another year and preserve an average return which will be fair and just and attract capital for extension and improvement of the telephone plant.

The dissenting commissioner is also of the opinion that better and more uniform service throughout Vermont should be demanded before a reduction in rates is made.

360—Depreciation.

The Commission is of the opinion that a 5% annual depreciation percentage for the subsidiary companies and a 4% depreciation percentage for the New England Company are sufficient. . . .

REFERENCES

RATES

400—Rate Theory.

GAS RATES AND ELECTRIC RATES COMPARED, *Gas Age*, 2 pages, April 1, 1914, p. 327.

This is a translation of an article by Herr Alzrecht, published in the *Journal für Gasbeleuchtung*, January 17 and 24, 1914. It describes German practice in regard to electric and gas rate-making. It is said that the great difference between the gas rate charge systems and the electric power charge systems seems to be a matter of psychology. The wording of the electric rate contracts is such that the consumer is under the impression that he is paying the abnormally low rate from the start, while in reality he is paying the standard rate at first, and benefits by the low rates only after passing a certain point. In the gas rate contracts now in use the consumer feels that he is paying the standard rate for a certain amount and the lower amount only by using a certain amount of gas beyond that point. As a result the electric interests due to their play on human character have an easier field and find their system to have greater publicity results than the gas systems now in use. It seems desirable to decrease gas rates as much as possible with the assurance that consumption will grow and that profits will not decrease but increase.

PUBLIC SERVICE REGULATION

132—Protection from Competition.

COMPETITION IN NEW JERSEY, by WILLIAM J. NORTON. *Electrical Review*, 6 $\frac{3}{4}$ pages, March 21, 1914, and March 28, 1914, p. 538, and p. 623. Editorial March 21, 1914, p. 560.

The above article draws attention to the fact that the Phillipsburg case (see 4 RATE RESEARCH 355) is the only instance in which the New Jersey Commission has decided in favor of admitting competition and that the decision may be criticized in the light of the Board's former rulings on the question of competition in the public utility field and also in the light of the well established precedents

of other commissions. There is a comprehensive resume of the decisions which have been handed down by the public service commissions of the various states, in the matter of protecting established utilities against unnecessary competition. In summary, it is said that with the exception of the California Commission the policy appears to be well established, and generally recognized, that where the company in the field is furnishing or can be required to furnish adequate service at reasonable rates it is entitled to protection from competition and that the public interests are best conserved by a prevention of unnecessary duplication. The California Commission is in favor of protecting a company giving adequate service at reasonable rates. Its policy in favor of admitting competition when the established company is delinquent in the matter of rates or service as a means of penalizing such company and affording a warning to other utilities having similar shortcomings is clearly on trial. The California Commission is questioning the wisdom of adhering to this policy. In the Phillipsburg case it is pointed out that according to the company's statement, which is not questioned by the Board, it will be in a position to furnish adequate service in eight months. The Board objects to the delay and authorizes the new company to give service, granting eighteen months in which to get ready.

The editorial states that in the Phillipsburg case the New Jersey Commission has openly departed from the very sound doctrine which it laid down in its early cases. A careful reading of the clauses contained in the decision leads one to believe that this decision was handed down against the better judgment of the Commission and that some issue, political or otherwise, has influenced the Commission in making such a reactionary decision.

261—Public Service Bills.

WILLIS BILL TO REGULATE PUBLIC UTILITIES INTRODUCED IN VIRGINIA. *The Isolated Plant*, March, 1914, $\frac{3}{4}$ page, page 26.

This states that R. H. Willis, Assemblyman from Roanoke City, Virginia, has introduced an extremely progressive bill calling for the regulation of Virginia Heat, Light, Water and Power Companies by the State Corporation Commission. It is said that it is hoped that this bill will be as satisfactory in its operation as the control of railways by the corporation commission. It takes the control of such companies entirely out of the hands of local authorities, except where the utility is owned by the city or town itself. The companies are thus removed from politics.

MUNICIPALITIES

830—Public Ownership.

THE MUNICIPAL LIGHTING PLANT. Editorial, *Journal of Electricity, Power and Gas*, March 21, 1914, p. 254.

This states that contrary to the general belief, the growth of municipal lighting plants is not so great as to furnish fear to the advocates of private ownership or to produce pleasure to those who think public ownership preferable. Considering the tremendous growth of the industry, the statistics just published by the Bureau of the Census show that relatively little progress has been made.

Sporadic municipal ownership causing a temporary disruption of the present order is said to be inevitable. A cause of this is that the rate of expansion, due to the inventive spirit fostered by private ownership has been so rapid, that these corporations have, in general, failed to keep the public fully informed as to the remarkable merit of the service rendered, the reasons for its excellence, the tremendous cost of its perfecting, and the advantage of its continuance. And because they have not been properly informed, these publics, swayed momentarily by the opposite idea, assume that they can command the earth to stand still that the sun's rays will ever shine beneficently on them. But to stand still, is to retrograde. With the removal of private ownership, the main incentive for invention, improvement and progress, it becomes but a question of time before its advantages again become apparent. Municipalities then discontinue their experiment of public ownership.

GENERAL

980—Public Relations.

THE PUBLIC AND PUBLIC SERVICE CORPORATIONS, by R. F. PACK. Address given before the Minneapolis Electrical Association, March 18-20, 1914.

This sums up briefly the history of electric utilities, the need of their having a monopoly in the field they serve, and the relations which exist between the public and companies. There is an outline of the duties of public to utility, and utility to public. It is suggested that if utilities adopt a broad minded and fair policy in their dealings with the public, and endeavor to make plain the many intricate problems connected with the furnishing of such service, there will be less difficulty with official and public bodies, and with customers.

980—Public Relations.

PUBLIC POLICY OF PUBLIC UTILITY CORPORATIONS, by S. WALDO COLEMAN. Article and Editorial, *Journal of Electricity Power and Gas*, 2½ pages, March 7, 1914, p. 204 and p. 210.

This states that the present distrust of public utility corporations is due to the corporations' failure to be sufficiently frank with the public concerning their business. It is said that due to this secretiveness there has come a world-wide tendency to hamper such corporations, and unfortunately the public has not differentiated between the corporations honestly and fairly conducting business, and those that are not. It has resulted in making it difficult for public utilities to obtain the money needed to make necessary improvements and extensions which would not only be of benefit to the companies and their customers, but also to the cities served by the companies. As is well known, baiting of public utility corporations has been common practice among some politicians. In order that public utilities may expand, serve new sections of growing communities and increase the service to present districts, it is necessary that sufficient capital be obtained, and no business requires as large an amount of capital in proportion to gross business as the public utility business does. Regulation that removes all incentive for developing and expanding on the part of the utility company, results in a community's being poorly served and its growth retarded.

The editorial states that the fact that the public do not appreciate the inherent difficulties attending the operation of public utilities is due simply to the fact that they have not been told. It should be pointed out to the public that invention and the consequent increased efficiency of production is a greater factor than regulation in the reduction of rates.

149—Holding Companies.

THE ANTI-TRUST HOLDING COMPANY BILL, Editorial, *Electrical World*, March 28, 1914, p. 681.

This quotes from the anti-holding company bill to show that as the bill now stands it may affect many companies in the electrical industry. It is said that it is no comfort to officials of these companies to reflect that the bill is not intended primarily to disrupt their organizations but is directed at trade operations of a wholly different character. It ought to be possible for the lawmakers to find legally binding language to restrict the law to the abhorrent practices which they seek to correct. If they think that this is not possible, they at least can add a clause plainly exempting from onerous restrictions the class of public utility properties and holding companies whose practices are not criticized.

COURT DECISION REFERENCES.

226.2—Extension of Service.

PALMER ET AL V. RAILROAD COMMISSION OF CALIFORNIA ET AL. Decision of the SUPREME COURT OF CALIFORNIA. January 20, 1914. On Rehearing, February 19, 1914. 138 Pacific 997.

Various citizens of San Diego County were refused irrigation service by the Southern California Mountain Water Co., whose pipe lines ran one mile from their lands, unless they deposited the cost of the necessary line extension. Complaint was made to the Railroad Commission that the applicants were entitled to the service, since their lands were included in the places designated in the notices of appropriation posted by the company as the "places of intended use" of the water claimed. The Railroad Commission dismissed the complaint, and the Court affirms the Commission's decision.

129.3—Refusal of Service.

ATHENS TELEPHONE CO. V. CITY OF ATHENS. Decision of the COURT OF CIVIL APPEALS OF TEXAS. January 24, 1914. Rehearing Denied February 14, 1914. 163 Southwestern 371.

In this case the telephone company, whose franchise required it to furnish telephone service for \$1.50, advanced its price for business telephones to \$2.50 per month, and denied telephone service to citizens of Athens who refuse to pay the advanced rentals. This decision affirms an order of the lower court enjoining the advanced rates pending full investigation of the matter.

840—Municipal Operation.

ASHER V. CITY OF INDEPENDENCE et al. Decision of the KANSAS CITY COURT OF APPEALS. January 5, 1914. 163 Southwestern 574.

In this case the city is held liable for injury since, in spite of official warning given to its municipal electric department, it permitted the construction of a fire escape on a building within eight or ten inches of a live wire which was strung along an alley. The Court says "In operation of a public utility for profit, the city was not acting in its governmental capacity, but was subject to the same rules and duties as would have governed and developed upon a private corporation engaged in such business. . . . The city had no right to string a deadly wire so close to the building, and then count on its owner either abstaining from the free exercise of a lawful property right or giving notice of a purpose to exercise such right."

149.1—Stock Ownership.

VENCEDOR INV. CO. V. HIGHLAND CANAL & POWER CO. Decision of the SUPREME COURT OF MINNESOTA. February 13, 1914. 145 Northwestern 611.

This holds that an electric company is a manufacturing concern. Therefore the stockholders of the company are exempted from personal liability for the company's debts, under Section 3, Art. 10 of the State Constitution which reads: "Each stockholder in any corporation, excepting those organized for the purpose of carrying on any kind of manufacturing business, shall be liable to the amount of stock held or owned by him."

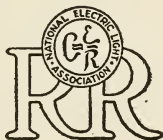
We therefore hold that the corporation in question was organized for the exclusive purpose of manufacturing, within the meaning of the Constitution, and that the stockholders thereof are not personally liable for its debts, notwithstanding the fact that it is also a public service corporation and clothed with the power of eminent domain.

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No. 3

RATE RESEARCH



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Rate Research

Vol. 5

CHICAGO, APRIL 15, 1914

No. 3

For statement of facts and opinions contained in papers abstracted herein, the Association does not hold itself responsible

RATES

FAMOUS RATE PAPERS—No. 4.

HIGH EFFICIENCY LAMPS; THEIR EFFECT ON THE COST OF LIGHT TO THE CENTRAL STATION

By S. E. DOANE. Read before the National Electric Light Association, St. Louis, Mo., May, 1910. *Proceedings of the Thirty-third Convention of the National Electric Light Association*, pp. 152-170.

(NOTE—Paragraph headings are not in original.)

In beginning this paper permit me to acknowledge my indebtedness to several Central Stations who have freely opened their books to us and to those who have given us their time for consultation and advice, and to Messrs. Merrill, Cooper and Eisenmenger of my staff for working up the material.

It is the purpose of this paper to discuss briefly the effect of the high efficiency lamp upon the cost of light to the Central Station as developed by our experience, observation and analysis.

It became obvious to the lamp manufacturer when the new high efficiency lamps came upon the market that there were many problems connected with their use concerning which we should have information. These lamps were so much more efficient than any with which we had had experience, that there was no basis from which it was possible to determine just what course to follow in placing the new lamps before the lighting industry and the public.

Under such circumstances our only recourse was to determine the best policy to follow from a careful analysis and study of the conditions under which the lamps were to be employed.

The author of this paper consulted Central Station men of much experience from all parts of the country who operate all types of stations. A number of the men of the author's staff have been employed for a period of over two years collecting and working up statistics and data from all available sources.

490—History and Development of Electric Rate Theory.

It is most surprising to find that although a great many papers have been written in the last twenty years on this subject and derived questions, practically the only statistical information which is available for independent discussion is to be found in the reports of the United States census and in the reports of the various state commissions.

EDITORIAL NOTE.—All indented matter is direct quotation.

These figures are not given in such detail that they can be understood without further detailed knowledge of the business itself, consequently it is through the assistance of the Central Stations, who have freely opened their books to us and to others expert in the industry, that we are able to make such detailed analysis as we take pleasure in presenting to you today.

Among all the papers, articles, discussions, etc., the contributions of two men who have been recognized as pioneers in the discussion of certain fundamental features of the subject, stand out by themselves. Practically all of the contributions other than those of these two men have dealt with details of the broad plan of cost analysis proposed by one or the other, or both.

Few of the papers published within the last twenty years have been based upon a fundamental cost analysis, but rather upon the effect on the customer, etc.* It is not possible to give due credit to the numerous authors whose thoughts and opinions we have studied with both pleasure and profit, and I trust you will understand that it is not my purpose or desire in presenting these figures to under-rate for a moment the stupendous amount of work which has already been done on this subject.

510—Forms of Rates.

Dr. John Hopkinson, F. R. S., in the presentation of his presidential address on the "Cost of Electric Supply," delivered before the Junior Engineering Society in London in 1892, succeeded in establishing a broad principle which, if it had been recognized to any extent previously, had never before been presented to the public in such an authoritative or conclusive manner that it was recognized and accepted by the industry as a whole. Dr. Hopkinson divided cost into fixed and operating classifications, which division is universally recognized and conceded today to be correct.

Mr. Doherty, in 1900, in a paper before this association, presented the same idea, having worked it up independently, but Mr. Doherty proceeded to further divide the fixed costs, showing that it was not proper to apportion them entirely by the customer's maximum demand.

Inasmuch as Mr. Doherty absolutely and completely recognizes Dr. Hopkinson's division of costs into fixed costs and operating costs, but goes further, in that he separates the fixed cost into two sub-

*It is rather interesting to trace the relative amount of attention given to the rate question during a number of years, by noting the number of references listed on the subject in the Engineering Index. From 1892 to 1897, six references were made to articles on rates appearing in American publications. About this time the Wright maximum demand system of charging awakened considerable interest, as we find that in 1898 six references were made to articles on rates, five in the succeeding year, three in 1900, and four in 1901. Then for a period of four years but two references were made each year until 1906, when interest in the question seems to have subsided still more, as but one reference was made. The advent of the high efficiency lamp, and the fact that it was becoming a commercial factor, may have been the cause for a revival of interest in regard to methods of charging, for in 1907, five references to the subject were made, five in 1908, and four in 1909. The reference to tariffs and rates in foreign magazines shows a similar awakening of interest abroad within the last four or five years, the number of references on the subject, from 1892 to and including 1906, being but eleven, while the next three years showed a total of sixteen. Altogether, seventy-four references are made, showing that considerable attention has been given to the subject of proper rates, tariffs or charges for the Central Station service.

divisions, it is obvious that if we attempt our cost analysis on the basis suggested by Mr. Doherty, that it is entirely possible for us to view it from the standpoint suggested by Dr. Hopkinson by combining the two divisions of the fixed cost, whereas the contrary is not true, consequently throughout this paper we have proceeded along the lines indicated by Mr. Doherty with the expectation that the paper will be of equal value from either the Hopkinson or Doherty standpoint.

410—Cost of Service.

In discussing the effect of the high efficiency lamp on Central Station costs, let us first agree upon the premises on which we base our analysis and argument.

First. Let us agree that our discussion is limited to the lighting load. Second. Let us agree that in order to obtain a fair average and to include the yearly mid-winter peak, our analysis must cover a period of at least one year.

Third. Let us agree that the average equipment in the country as a whole must be considered to be not excessive for the maximum demand, from the standpoint of a cost analysis.

Fourth. Let us agree that every item of out-go, including dividends, interest, depreciation, obsolescence, and all losses, are as much items of cost as the usual items of coal, labor, etc.

As a basis for the discussion which is to follow, I wish to present the results of a careful cost analysis of a number of Central Stations, which is summarized in Table 1. In this table four separate cases, designated as "a," "b," "c," and "d" are shown, together with their weighted average.

In the following table, "a" represents a large Central Station giving free renewals, "b" represents another large Central Station operating under considerably different conditions, but also giving free renewals, "c" and "d" represent the average conditions of a number of small Central Stations. There are about 70 Central Stations in the East, represented in "c," and about 40 in the West in "d." We have analyzed the figures of Central Stations of lesser size than the two large ones indicated by items "a" and "b," and of greater size than those indicated by items "c" and "d." The figures are not of interest excepting to confirm the findings in the table.

The percentage distribution of the total cost under the items "General Expense," "Distributing Expense," "Generating Expense," etc., is shown separately for each of the four cases represented in the column headed "% of total Station Expense." Each of these items has been further analyzed and distributed by percentage under one or more of the headings as shown in the last three columns of Table I. The portion of each item charged to "Output" represents the relative proportion of the cost which depends upon the number of kw.-hrs. generated. The portion charged to "Demand" represents the relative proportion of the cost which depends upon the capacity of the station, which in turn depends upon the "Demand."

The portion charged to "Consumers" represents the relative proportion of the cost which depends upon the number of consumers connected and served. The analyses were actually carried out in considerably greater detail as to the items of expense considered, but have been grouped under a few general heads in Table I in order to present the results in a simple form.

411—Apportionment of Expense.

TABLE 1
Central Station Cost Analysis

ITEM		% of Total Station Expense	% Item Output	Proportional to Demand	Consumers
General Expense	<i>a</i>	12.7	....	75.4	24.6
	<i>b</i>	14.5	....	71.0	29.0
	<i>c</i>	10.2	....	82.8	17.2
	<i>d</i>	10.9	....	80.0	20.0
	Weighted average	12.0	....	76.9	23.1
Distributing Expense	<i>a</i>	15.2	50.2	26.4	23.4
	<i>b</i>	9.7	44.7	21.4	33.9
	<i>c</i>	17.8	50.6	24.7	24.7
	<i>d</i>	12.8	31.8	56.9	11.3
	Weighted average	14.4	47.0	28.9	24.1
Generating Expense	<i>a</i>	13.4	80.7	19.3	....
	<i>b</i>	17.7	74.6	25.4	....
	<i>c</i>	32.1	70.3	29.7	....
	<i>d</i>	32.3	67.9	32.1	....
	Weighted average	23.9	72.0	28.0	....
Taxes and Insurance	<i>a</i>	8.1	....	80.0	20.0
	<i>b</i>	10.9	....	86.2	13.8
	<i>c</i>	6.8	....	85.9	14.1
	<i>d</i>	4.4	....	80.0	20.0
	Weighted average	7.8	....	84.0	16.0
Depreciation	<i>a</i>	11.6	....	80.0	20.0
	<i>b</i>	11.5	....	79.5	20.5
	<i>c</i>	9.0	....	85.9	14.1
	<i>d</i>	6.0	....	80.0	20.0
	Weighted average	9.8	....	81.8	18.2
Interest and Dividends	<i>a</i>	39.0	13.1	68.1	18.8
	<i>b</i>	35.7	27.2	55.1	17.7
	<i>c</i>	24.1	26.4	61.4	12.2
	<i>d</i>	33.6	8.9	73.7	17.4
	Weighted average	32.1	19.7	63.7	16.6
Total.....	<i>a</i>	100.0	23.5	58.5	18.0
	<i>b</i>	100.0	27.2	55.1	17.7
	<i>c</i>	100.0	37.9	50.8	11.3
	<i>d</i>	100.0	28.9	59.5	11.5
	Weighted average	100.0	30.3	55.1	14.6

"a" Represents a large Central Station giving free renewals.

"b" Represents a large Central Station giving free renewals.

"c" Represents the average of about 70 Stations in the East.

"d" Represents the average of about 40 Stations in the West.

In preparing the foregoing table, each item of cost has been carefully considered and has been listed under fixed cost or operating cost, or has been divided and part listed under one head and part under the other. The fixed costs have been divided into two subdivisions, one of which we call the "Demand Cost," the other the "Consumer's Cost." After a proper allowance for the diversity factor, this demand cost, expressed as a fixed charge per kw. of maximum demand, indicates, in our judgment, the amount which would properly cover the cost involved in supplying the maximum demand. This cost is one of the two components which go to make up the total fixed cost. It may be claimed that this demand cost is not the same per kw. of maximum demand for all sizes and classes of customers. The advocates of this view tend to increase the demand cost per kw. of demand to the small customer, consequently any concession to this view magnifies this feature of the cost analysis for customers of the average size, and smaller customers.

411.1—Customer Charges.

The customer's component of the fixed cost, for the average customer, is a cost which an individual customer causes, whether or not he actually consumes any current. It will be claimed that this customer's cost is also not fixed. The tendency in supporting such a claim is to decrease somewhat such cost for a small customer.

It is not possible, within the confines of one paper, to discuss these features in detail, in fact, a more extended investigation and more data is necessary.

We applied the following rules to determine these cost divisions:

If an analysis of any item showed that an increase of 100% in the number of customers, without the total output or total demand necessarily being increased, would presumably double the expense, such we will say as in the reading of meters, we would class that item as an expense which varied directly with the number of customers, that is, it would be 100% consumers' expense.

If a particular item of cost would be doubled with an increase of 100% in the capacity of the plant, even though the number of customers remained the same, we would put that item in the class which varied directly with the demand.

411.3—Energy or Output Charges.

In a similar way, items would be classified under output.

An analytical separation of these costs develops curious conditions. For illustration, the coal consumed in the station does not vary directly with the output. It depends in part upon the maximum demand. It takes more coal to supply a given number of kw.-hrs. with a high demand or peak than with a low one. This shows that we must put a portion of the cost of coal under the demand cost and a portion under the output cost.

There are many other fixed and operating costs which do not fall entirely under any single one of these three general divisions of

cost. As a further example, an actual destruction of transformers or apparatus in service could not be said to vary with demand, but is rather a profit and loss matter. Losses through floods or other losses of such general character, even though they be costs of repair of generating apparatus, which it would seem might belong to demand cost, might really have to be distributed as a loss and hence be considered as a negative profit and be applied to all three divisions of cost.

There is another phase of the matter. Invested capital may be so applied in anticipation of future needs that the cost of an item for double the service now being rendered need not necessarily be double the present cost. A building which at present is not being utilized to its full extent would arbitrarily place a higher charge against a certain division of cost than at first thought would seem to be justified. It might be shown, however, that had the building been built the exact size when the plant was first constructed that further construction would have been so expensive that when the proposed capacity of the larger building would have been reached in this manner that the larger building was much the cheaper, counting all the interest, additional charges, taxes, etc.

There are many vexing questions of this character and there is much opportunity for extended consideration of this broad question of cost when once the basic principles shall have been firmly established by usage. These questions of detail, however, are not usually of sufficient magnitude to affect our broad deductions appreciably.

Many of these questions arise when one begins to consider the classifications of the fixed costs or charges. These classifications require the inclusion of some charges along with those which are really fixed, which are not generally considered as fixed charges. There are many general office charges and some station costs, such as in the class of the supervisory and technical salaries, etc., etc., which are fixed from the standpoint of a going concern, but which might disappear or be reduced in case such a concern was purchased by another.

As we go further into this subject, the extreme importance of the consumer's cost, especially in the case of the small consumer, must be conceded, and, consequently, we have distributed these costs with extreme care.

We believe that the percentages we give in the table are conservative and that they indicate, at least, the nominal cost at which a new customer can be added to the system on the present basis.

We must concede that every customer, no matter how small, must have a pair of wires and necessary poles, fixtures, conduits, etc., to bring the wires to his premises. We must concede that he must have a meter or some current limiting device and that he must demand some attention in the way of meter reading, inspection, billing, etc., etc. Consequently, we must all agree that any given customer, as

pointed out by Mr. Doherty, costs the Central Station some definite minimum amount per year or average month, even though it may be that he uses no current whatever.

The three divisions of costs, indicated above, are commonly referred to as the "Demand Cost," the "Consumer's Cost" and the "Output Cost," and in analyzing costs of rendering service and energy to individual consumers, are conveniently expressed as unit costs in terms of kw. of maximum demand (or equivalent unit, such as floor space illuminated or light delivered), the customer, and the kw.-hr., respectively.

It is a matter of much interest to discover that, although individual cases differ from each other, the differences are largely cancelled in the final summary. The station which has a large distribution network, and a few customers, will probably have a relatively large cost per consumer. The plant which operates with water power or whose investment is large for physical reasons, would have a large demand cost. Either or both of these cases may be warranted by a very low kw.-hr. cost due to the use of cheap coal or water power, etc. The two large Central Stations mentioned in items "a" and "b" of the table have rather large average customers. Their average customers consume about 3.6 and 2.3 kw., respectively, at the time of maximum demand.

The Massachusetts Commission report would indicate that the average customer of Massachusetts consumes about 1.5 kw. at the time of maximum demand. The Wisconsin Commission report would indicate 1.8 kw. as the average maximum demand.

The average customer referred to in Mr. Lloyd's paper read before this association a year ago shows that the lighting customers he considered consumed about 0.7 kw. at the time of maximum demand. We understand, of course, that Mr. Lloyd does not mean that this is the average size of the Chicago consumer, but is only the average of the particular classes which he discussed. Mr. Lloyd's discussion before this association meeting last year, also showed the load factor to vary from 5 to 26%. Our observations would tend to confirm these figures and our further analysis indicates that 11% is about the right load factor to apply to the average consumer. We have also assumed that a load factor of 7% may represent a short hour user and a load factor of 20% a long hour consumer.

The term "load factor" in this connection is used to mean the percentage which the actual kw.-hrs. consumed in a year bears to the total number of hours in a year, namely, 8760 times the maximum demand.

So much for the facts.

628—Lamp Efficiency.

Let us now discuss the effect of the high efficiency lamps on the cost of serving the Central Station average customer, after which we

will consider the effect of the high efficiency lamps in serving larger and smaller customers with larger and smaller load factors.

With the figures in the foregoing portion of this paper as a basis, we have plotted some diagrams which show the effect of the adoption of the high efficiency lamps by a customer of 1.6 kw. maximum demand and 11% load factor. (See Fig. 1.)

We have chosen to graphically represent the relative distribution of the three items of cost entering into the cost of serving the individual consumer under various conditions by rectangles divided into three parts, which show, according to the relative size of the parts, the magnitude of the several items of cost.

The fixed customer's cost is indicated by the letter "c." The total demand cost for 1.6 kw. maximum is indicated by the letter "d" and the total cost of the kw.-hrs. actually consumed is represented by the letter "o." In this chosen representation "c" is 14.6% of the total, "d" is 55.1%, and "o" is 30.3% of the total. This, you will note, represents the average figures obtained from the foregoing tabulated analysis.

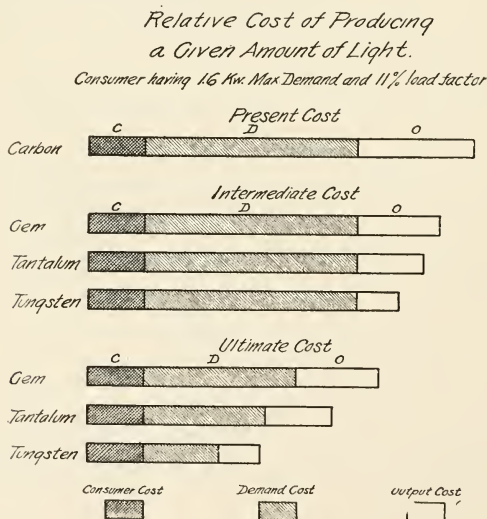


Fig. 1

The first single rectangle in Fig. 1 represents the cost of the average consumer, which we have assumed to have 1.6 kw. maximum demand and a load factor of 11%. Let us assume now for a moment

that this average customer changed to some one of three high efficiency lamps, and obtained the same amount of light as before. The result is shown in the middle group of diagrams in which the longest parallelogram shows the effect on the cost of the adoption of the Gem lamp, the next the Tantalum lamp, and the third, the high class Tungsten filament lamp. You will note that without adding any new customers, the Central Station is unable to reduce the demand cost, which is charged against the customer, and that the sole reduction is therefore due to the reduction in the number of kw-hrs. required to produce the same amount of light in a more efficient manner.

In the illustration before you, the immediate reduction of cost due to the adoption of the Gem lamp is 8.7%, the reduction due to the adoption of the Tantalum lamps is 13%, and the reduction due to the adoption of the high class Tungsten filament lamp is 19.5%. It is evident, therefore, that even though the consumer's consumption of energy is reduced two thirds, the cost of light is only reduced by two thirds of that portion of the cost which varies with the kw-hrs. The total cost reduction is, therefore, only about 20% instead of 60%.

In all these assumptions the renewal cost of the lamp has not been considered to have increased, since it is believed that the general practice of Central Stations everywhere is to charge the difference between the cost of the carbon lamp and high efficiency lamps to the customers and as this cost of light is being considered from the standpoint of the Central Station, the cost of renewal does not figure therein.

In the same diagram the lowest group composed of the three short rectangles shows what happens when the station has added enough customers to entirely utilize its output after every customer has been changed to high efficiency lamps. This shows that by the adoption of the high class Tungsten filament lamp the cost of producing light for the average consumer is reduced 55%.

REFERENCES

RATES

552—Renewals.

HOLYOKE MUNICIPAL PLANT DROPS FREE LAMP RENEWALS. *Electrical Review*, 1/6 page, April 11, 1914, p. 719.

This states that the lighting department of the city of Holyoke, Massachusetts, has discontinued free renewals of all incandescent lamps, and will hereafter sell them to users at cost. It has been the practice to renew carbon filament lamps free, but to charge for tungstens. It is held that the effect of the change is likely to be to stimulate the use of the newer and more efficient type of lamps, and to rapidly eliminate the carbon lamps.

INVESTMENT AND RETURN

360—Depreciation.

THE "COST OF PROGRESS" AND THE "PROFIT OF PROGRESS" IN THE TELEPHONE FIELD. Editorial, *Engineering and Contracting*, April 8, 1914, p. 403.

This comments upon the extremely short life of a telephone plant, due to functional depreciation. It is pointed out that the "cost of progress" in the entire electrical industry has been enormous; but that the profit of progress always exceeds the "cost of progress," else the engineers and business men in charge of public utilities would not order the frequent renewals and changes in plant. The criterion that an engineer applies is always this: A change in plant is economic when the new plant can be so operated that its annual cost per unit of saleable product, including therein the interest on the abandoned plant, is less than the present annual cost. If this criterion were to lead to writing off nothing from the plant account for abandoned plant, it would result eventually in overloading the plant account to such a degree that new capital entering the same field could produce the most modern plant at much less cost than the capital account of an old company. Hence it is that abandoned plant should be charged off, so as to leave the capital account loaded only with the cost of the modern existing plant. This bookkeeping process, however, should not obscure the fact that the annual saving effected by a new device yields, when divided by the annual interest rate, a sum that more than equals the original cost of the abandoned plant. In short, the profit of progress exceeds the cost of progress. Relatively old as this principle is, repetition of it should not be without value, for there is a tendency to ignore the claims of public utility companies for liberal depreciation reserves.

300—Investment and Return.

DECISION OF THE COURT OF APPEALS IN THE KINGS COUNTY LIGHTING COMPANY CASE, by WILLIAM J. NORTON. Article and Editorial, *Electrical Review*, 3 pages, April 11, 1914, p. 729, and p. 711.

This gives the history of this case, and the decision of the New York Court of Appeals (see 5 RATE RESEARCH 19). The editorial discusses the importance of the holdings on going value, appreciation, and paying over mains; and draws attention to the fact that the court's definition of going value agrees with that followed by the Wisconsin Railroad Commission, whose view makes going value represent the losses during the period of development of the business due to the income not being sufficient to provide a fair return to the investors upon the invested capital.

PUBLIC SERVICE REGULATION

224—Rate Regulation.

SEVENTY-CENT GAS CASE ABANDONED BY THE CITY: POLITICIANS USE PUBLIC UTILITY ISSUES TO SECURE ELECTION TO OFFICE. *Weber's Weekly*, 4 pages, April 11, 1914.

This gives facts, dates and figures, showing how fixing the price of gas in Chicago has been used as a political issue. An outline is given of the Harrison campaign of 1911, when the mayor and various aldermanic candidates were elected on a 70-cent gas pledge—a pledge made wholly without investigation of the economic and legal practicability of fulfilling it. Attention is drawn to the fact that the action subsequently taken by the city to carry out this pledge, was based solely on the Bemis report; and that the Bemis report was based solely on the figures brought out by Hagenah, who held that 70 cents was a confiscatory rate. It is pointed out that this expert investigation cost the city tens of thousands of dollars;

and that Professor Bemis has now given out the opinion that on account of the increased cost of oil, "a further consideration of the rates prescribed" in the ordinance is inadvisable. The city law department has recommended that the matter be dropped, because of Professor Bemis' opinion, that action is advisable, and because the appointment of the Public Utilities Commission makes the city's jurisdiction in the matter doubtful.

211—Qualifications and Appointments.

THE NEW YORK COMMISSIONERS. Editorial, *Electrical World*, April 4, 1914, p. 741.

This states that the Public Service Commission appointments of Governor Glynn, of New York, are greatly to be regretted. This is not a reflection upon the appointees, who may be estimable incumbents of other offices, and of wide usefulness in other spheres of life. It is a criticism of the Governor for his choice of men to fill positions in which there is special need of aptitude for the duties to be performed. The appointments are of as much concern and regret from the corporation standpoint as from the public standpoint. Anything that lessens the efficiency of regulation discredits the whole policy of state regulation. It is the policy of state regulation on which the companies must depend for a fair settlement of their serious problems. If state regulation is a failure, the alternative will be public ownership and operation, with even greater failure.

200—Public Service Regulation.

BYLLESBY ON PUBLIC SERVICE COMMISSIONS, COMPETITION AND HOLDING COMPANIES. *Electrical Review*, 1 page, April 11, 1914, p. 738.

This discusses the recent report of President H. M. Byllesby, of the Standard Gas and Electric Company, to the Stockholders, for the year 1913. Public service regulation is referred to favorably. It is said that commissions approach the problems of public utility corporations with an increasingly fair-minded attitude, and a desire to do justice to all parties, and that as their knowledge of the services rendered, and the problems encountered increases, their attitude is becoming more favorable to the proper protection of these interests. It is unfortunate that in many cases the laws under which these commissions are established, are too narrow in their scope and unnecessarily limit and hamper the jurisdiction and activity of these bodies, but as the great benefits of the work undertaken and carried through by these commissions is more fully realized, it is to be hoped that there will be shown a disposition by the law-making bodies to extend rather than restrict the jurisdiction of the commission. The favorable effect of stock and bond, and rate regulation, is especially referred to. It is said that holding companies in the utility field have so thoroughly demonstrated their great advantages in the way of economical management and facilities for financing over those possessed by isolated local utility companies, that it is hardly within the realm of possibilities that any serious attack will ever be made upon them.

200—Public Service Regulation.

WILL REGULATION BY COMMISSIONS SURVIVE? Editorial, *Electrical Review*, April 11, 1914, p. 710.

This traces the growth of commissions, as the best method of regulating public utilities. Comment is made upon the immense pressure that is being brought to bear upon the Interstate Commerce Commission, in the freight rates case, by various organizations, newspapers, etc. It is said that any such attempt to thus influence a judicial body represents the grossest effrontery, and is a thing not usually tolerated with respect to court cases? Even more strictly is it true in England, that no publication would venture an opinion as to how a court case should be decided before its judicial trial is completed. If commission cases are to be decided upon any other grounds than their merits, as established by the evidence brought out in the investigation and hearings, and upon the estab-

lished principles of law and public policy which relate to them, it must be evident that this form of regulation will eventually fail. The proper attitude toward this function of government upon the part of citizenship of the country, as reflected in public opinion, is just as essential as the proper selection of men to serve upon the commissions. The latter consideration also represents a possible element of failure in the working out of the commission idea. Our present judicial system, which is several centuries old, has survived, and will continue, in spite of the occasional appointment or election of corrupt judges and miscarriages of justice, but can a new system of corporation control survive under any but the most promising conditions for its satisfactory working.

260—History and Development of Regulation.

HISTORY OF COMMISSION GROWTH IN THE SEVERAL STATES, by BERNARD FLEXNER. Submitted to the Judiciary Committee of the House of Representatives of the United States. Pamphlet, 12 pages.

This traces the growth of commissions from the establishment of the earliest railroad commissions in 1844, to the present. The gradual enlargement of the jurisdiction, and powers of the various commissions is traced. It is pointed out that of the important powers exercised by the modern commissions, those relating to service and observance of law, date from the organizations of the first commissions; that those relating to rates and rate making go back to the seventies. Commission control of capitalization antedates the period of 1907, which marks the beginning of the swift development of public utility control. The valuation of corporation property, other than for purposes of taxation also antedates the modern commissions. The provisions of the Utility Law designed to give the commission control of the field by regulating the purchase and sale of securities, consolidations and reorganizations is a product of the last stage of commission growth. None of these statutes go further back than the Massachusetts Law of 1906. The present tendency is to give the commission ample powers over inter-corporate relations. In a number of states, municipalities have been given the right to acquire the property of gas, electric and water utilities by condemnation. In 1899, Colorado provided that all franchises for such utilities should be thereafter granted or renewed with the understanding that the municipality should have the right to purchase at the actual cash value if they desired. In 1902, Massachusetts gave municipalities this right to purchase, and in 1907, Wisconsin provided for an indeterminate permit giving municipalities the right to take over such properties, upon paying just compensation therefor, to be determined by the commission. This policy has also been embodied in the Indiana statutes of 1913.

MUNICIPALITIES

830—Public Ownership.

WITH LOWER COSTS JAPANESE ROADS GET HIGHER RATES. *Railway Age Gazette*, $\frac{1}{2}$ page, April 10, 1914, p. 835.

This gives figures, issued by the Bureau of Railway News and Statistics, to show that although American railways pay the highest wages in the world and must face correspondingly higher prices for materials than are borne by any other transportation system, the American shippers today are paying a smaller bill to have freight transported than the shipper in Japan, whose railway, operated by the government, bears nearly, if not quite, the smallest burden in wages or costs of materials in the world. This striking showing of comparative economy is based upon the latest report of the imperial government railways of Japan. The railroad system paying the highest labor costs of operation in the world, in other words, is selling its commodity, transportation, at a smaller price than is the most cheaply operated system on the globe.

830—Municipal Ownership.

MUNICIPAL OWNERSHIP AND TAXES. Editorial, *Electrical Review*, April 11, 1914, p. 710.

This discusses the point made by Mr. Arthur Williams in his recent address on municipal ownership (See 5 RATE RESEARCH 15), that the non-property-owning inhabitants of a city often think that the burden of municipal ownership falls only upon those who own property. The statement is made that such a point of view overlooks the fact that taxes do not always come out of the pocket of the one who makes the direct payment to the collector, but are frequently paid indirectly by other classes of citizens. Where taxes are levied in the form of license fees, or as personal property taxes, upon the equipment of stores, factories, etc., or upon the buildings in which such mercantile and industrial businesses are carried on, it should be realized that the taxes constitute one of the expenses of carrying on the business, and must ultimately come out of the revenues which the consumer has to pay. A large proportion of taxes, therefore, are paid indirectly by the ultimate consumer of the materials handled in industrial and mercantile operations in other words, by the general citizen regardless of whether he be a property holder or not. Any idea that the consumer is getting something for nothing in case taxes are levied upon general property (as is the case in almost all communities) by having the municipality supply free service for such utilities as schools, parks, etc., or partly free services, as it does where an inadequate rate is charged for electric current, is largely fallacious.

830—Public Ownership.

PRIVATE OWNERSHIP PIONEERING. Editorial, *Journal of Electricity, Power and Gas*, April 4, 1914, p. 301.

This discusses the injustice of the fact that municipal ownership usually shows itself where plants are already successful, after the risk of pioneering has been run, instead of in virgin territory. It is pointed out that private ownership pioneering is entitled to and should receive justice in full measure.

GENERAL

149—Holding Companies.

THE GOOD SIDE OF THE HOLDING COMPANY, by WILLIAM M. WHERRY, JR. From an Address before the Tuck School of Administration and Finance, Hanover, N. H. *The Annalist*, 1 page, April 6, 1914, p. 442.

This points out the reasons for the existence of holding companies, and the advantages which the public has derived from them. It is said that a holding company is a financial device by which the problem has been met of securing better service, better management and wider market with greater security, without too large an investment. The public is interested in public utilities, in two capacities—first, as customers of the company, and second, as purchasers of securities. The advantages to the customer offered through the holding companies are two-fold. The service which he gets is in large measure increased and improved, the rates which he pays are lowered. The advantage to the purchaser of securities is also two-fold. His security becomes more marketable, and second, its safety is increased by distribution of risks.

A large holding company can command brains and efficiency to an extent which small companies cannot possibly attain. It is stated on good authority that London, with its numerous small companies, each supplying portions of the territory of London, has a unit cost of production of electric current to the manufacturer which exceeds the price charged to the customers of Chicago with its one big company supplying a great territory. The economies in operating cost and managerial efficiency which could be made by the seventeen or more London companies, if consolidated, would make a fortune in a single year.

COMMISSION REPORTS

252—Commission Annual Reports.

REPORT OF THE PUBLIC SERVICE COMMISSION FOR THE FIRST DISTRICT OF THE STATE OF NEW YORK, FOR THE YEAR ENDING DECEMBER 31, 1912. Vol. 1, 901 pages.

This is the sixth annual report of the First District Commission to the Legislature. The body of the report contains a general statement of the Commission's work, and chapters on rapid transit, dual system of rapid transit, rapid transit construction, elimination of grade crossings, regulation of transportation corporations, regulation of gas and electric corporations, and formal cases. The following appendices are included in the report: (A) Orders issued during 1912; (B) Informal cases—transportation; (C) Informal cases—gas and electric; (D) Rapid transit routes; (E) Rapid transit documents; (F) Electricity rates in New York City; and (G) Auditor's report. The volume contains a general index and an index to orders.

Chapter 7, which traces the commission's regulation of gas and electric companies, and Appendix F, which gives the rates charged for electricity by all the New York companies, are of special interest to central station men.

253—Commission Reports of Decisions.

REPORTS OF DECISIONS OF THE PUBLIC SERVICE COMMISSION SECOND DISTRICT OF THE STATE OF NEW YORK. From July 1, 1911, to May 7, 1913, Vol. 3, 871 pages.

This is the third of the bound volumes of the decisions of this Commission. It is valuable to central station managers, since it contains many important electrical cases, among which are the following:

Vol. III.

Page

Oswego River Power Transmission Co. competition case. (See 2 RATE RESEARCH 257).....	268
Red Hook Light and Power Co. competition case. (See 2 RATE RESEARCH 344).....	475
Granville Electric and Gas Co. rates case. (See 2 RATE RESEARCH 250).....	498
Ossining v. Northern Westchester Lighting Co. re street lighting rates. (See 2 RATE RESEARCH 344).....	502
Attica Water, Gas & Electric Co. v. Alden-Batavia Natural Gas Co. Re discrimination. (See 2 RATE RESEARCH 331).....	535
Buffalo Gas Co. rates case. (See 4 RATE RESEARCH 71).....	553
Buffalo v. Cataract Power and Conduit Co. rates case. (See 3 RATE RESEARCH 19, 149, 168, 187).....	656
Buffalo v. Buffalo General Electric Co. rates case. (See 3 RATE RESEARCH 19, 115, 131, 187).....	739
Northern Power Co. competition case. (See 3 RATE RESEARCH 71).....	817
The book contains, beside the reports of decisions, a table of cases reported, and a subject index.	

252—Commission Annual Reports.

FIRST REPORT OF THE PUBLIC UTILITIES COMMISSION, STATE OF KANSAS. MAY 22, 1911, TO NOVEMBER 30, 1912. 328 pages.

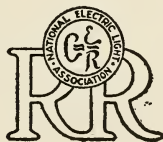
This report gives in full the decision of the Kansas Commission in the Parsons Railway & Light Company case, in which the company was protected from competition (See 2 RATE RESEARCH 208); in the Garden City Telephone, Light and Manufacturing Company rates case (See 2 RATE RESEARCH 393); and in the Parsons Railway & Light Company rates case (See 2 RATE RESEARCH 348). The greater part of the report, however, deals with railroad and telephone matters. Various sections treat of the Commission's work in general, recommendations for legislation, cases contested in court, rate cases before the Interstate Commerce Commission, etc. The Kansas Public Utilities Law is reproduced in full, and the commission's rules of procedure.

Vol. 5

April 22, 1914

No. 4

RATE RESEARCH



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Rate Research

Vol. 5

CHICAGO, APRIL 22, 1914

No. 4

For statement of facts and opinions contained in papers abstracted herein, the Association does not hold itself responsible

RATES

FAMOUS RATE PAPERS—No. 4.

HIGH EFFICIENCY LAMPS; THEIR EFFECT ON THE COST OF LIGHT TO THE CENTRAL STATION

By S. E. DOANE. Read before the National Electric Light Association, St. Louis, Mo., May, 1910. *Proceedings of the Thirty-Third Convention of the National Electric Light Association*, pp. 152-170. Begun in 5 RATE RESEARCH 35.

628—Lamp Efficiency.

*Relative Cost of Producing
a Given Amount of Light
Consumer having 0.5 Kw Max Demand and 7% load factor*

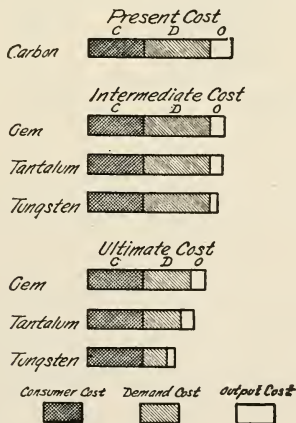


Fig. 2

A tabular expression of these diagrams is given later in a complete summary.

The total cost to the Station for the individual customer can be determined when the maximum demand and the load factor are known. Assuming a customer of small size, having, we will say,

EDITORIAL NOTE.—All indented matter is direct quotation.

0.5 kw. as maximum demand, let us analyze the cost conditions with both short and long hour use as represented by load factors of 7% and 20%, respectively. The results are indicated in figures 2 and 3.

*Relative Cost of Producing
a Given Amount of Light
Consumer having 0.5 Kw Max Demand and 20% load factor*

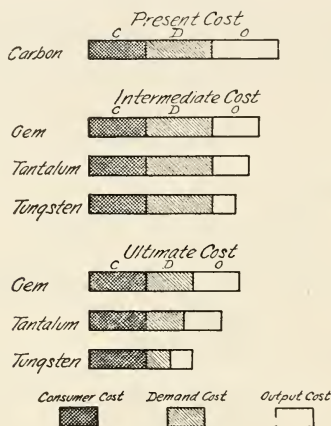


Fig. 3

We find that when such a customer is a short hour user that the cost of kw-hrs. is only about 16% of the total cost, when the customer uses carbon lamps and is only about 6% of the total cost when the customer uses the highest efficiency lamp, and we further develop the astonishing fact that even when such a customer receives the maximum benefit of this new lamp by addition of enough customers to employ the entire capacity of the Central Station, when utilized with high efficiency lamps the cost of actual energy consumed is still only about 10% of the total cost of carrying such a customer. Further reference to the comparative values show that even in the case of a long hour user having the same maximum demand the kw-hrs. consumed cost the Central Station but a very small part of the total cost for the customer. Most of the cost in the case of the small consumer is involved in supplying service of one character or another. These diagrams indicate that the high efficiency lamp materially reduces the cost of producing a given amount of light for such a customer, but that in the case of the average small customer the reduction in cost is in no sense comparable with the reduction in energy required for a given quantity of light.

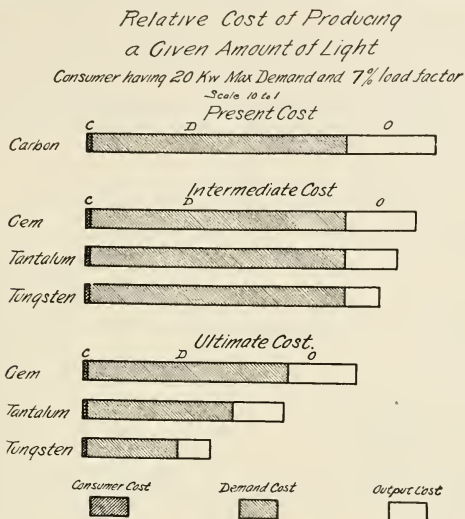


Fig. 4

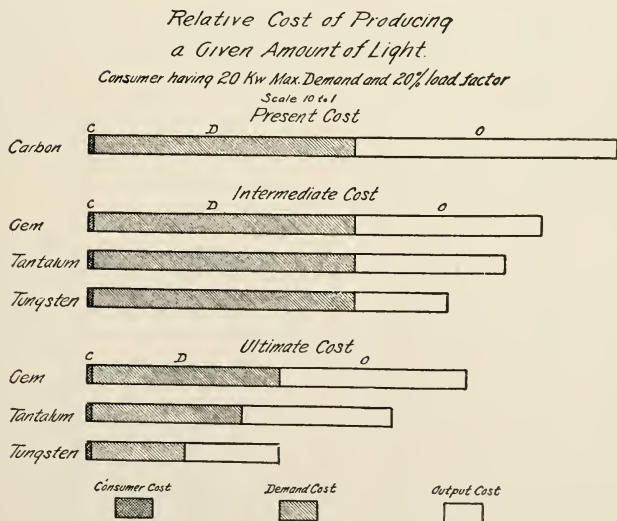


Fig. 5

Figures 4 and 5 representing a large consumer show a very different situation, as it will be observed that the consumer's cost is an insignificant proportion of the whole. The first reduction in cost due to the use of high efficiency lamps by a short hour customer, of this size, is only about 15% when such a customer uses the highest efficiency lamp most advantageously. A total summary of the foregoing diagrams follows.

TABLE 2
Relative Cost of Serving Various Customers

CONSUMER	PRESENT Cost		INTERMEDIATE COST			ULTIMATE COST	
	Carbon	Gem	Tanta- lum	Tungs- ten	Gem	Tanta- lum	Tungs- ten
Average	100.0%	91.3%	87.0%	80.5%	75.6%	63.8%	45.1%
Small—Short hr.....	100.0%	95.5%	93.2%	89.8%	82.5%	73.8%	60.6%
Small—Long hr.....	100.0%	88.1%	85.0%	77.4%	80.0%	70.0%	54.9%
Large—Short hr.....	100.0%	92.7%	89.1%	83.6%	71.8%	57.8%	36.7%
Large—Long hr.....	100.0%	85.9%	78.8%	68.2%	71.7%	57.5%	36.3%
Consumer.				Kw. maximum demand		Load. Factor	
Average				1.6		11%	
Small—Short hr.....				0.5		7%	
Small—Long hr.....				0.5		20%	
Large—Short hr.....				20.0		7%	
Large—Long hr.....				20.0		20%	

Each consumer is assumed to use the same total amount of light after changing to the high efficiency lamps as was used with the Carbon lamps.

The logical effect of the high efficiency lamp is to increase the number of small consumers. This means an increase in the proportion of the Central Station expense for labor in connection with the distributing system and the accounting, etc., which we have classified under "Consumer's Cost." The addition of many new customers will improve the load factor of the station somewhat, as there is no reason to assume that the day load, which is not a lamp load, will not increase with an increase in the number of customers, even though the current consumed at the time of maximum demand does not increase because of the high efficiency lamps.

It is of course obvious that a Central Station could always take care of an increased number of customers without using high efficiency lamps, by increasing the size of the plant, but it is also obvious that the use of the high efficiency lamps will allow it to greatly increase the number of customers served without materially increasing the station and generating investments.

Table 3, which follows, shows, on the basis of the foregoing statistics, what, in a general way, might be expected, when that time in the future arrives, when all of the Central Station customers have changed to the highest efficiency lamps. Of course, we know that the time will never come when every lamp on the circuit will be of the highest efficiency. We, however, can assume any value we may desire and for the exception still use the table which follows.

The table is drawn up on the assumption that every customer in the future will have changed to the use of high efficiency lamps. It

is anticipated, of course, that between now and the time when this condition will have been reached, that each station will have increased its number of customers, consequently, we have made our assumption to include all percentages beginning with no increase in customers and ending with 180% increase in customers, at which time, the station will be again entirely loaded. This table, of course, is drawn up on the further assumption that a customer will not increase the amount of light he uses at peak hours. I firmly believe this assumption is warranted in the case of the domestic user and that it is warranted in essence in all cases, as I believe that we are rapidly reverting to a condition of somewhat increased light, perhaps, but not to an increase sufficiently great to materially affect this assumption.

TABLE 3
Effect on Station Cost and Output Produced by Adoption of the Highest Efficiency Lamps

(Assuming that each Consumer produces the same amount of light with highest efficiency lamps as with the lamps of low efficiency.)

Number of Consumers in % of the number supplied at present with low efficiency lamps	COST TO STATION				Kw-hrs. Consumed and maximum demand in % of that with low efficiency lamps.	RELATIVE COST	
	Consumer	Demand	Output	Total		*Per Kw-hr	Per Consumer
	Per Cent	Per Cent	Per Cent	Per Cent	Per Cent	Per Cent	Per Cent
100% using low efficiency lamps.	} 14.6	55.1	30.3	100.0	100.0	100.0	100.0
Changed to the following % using highest efficiency lamps							
100	14.6	55.1	10.8	80.5	35.7	225.0	80.5
110	16.1	55.1	11.9	83.1	39.3	212.0	75.5
120	17.5	55.1	13.0	85.6	42.9	200.0	71.4
130	19.0	55.1	14.1	88.2	46.4	190.0	67.8
140	20.4	55.1	15.1	90.6	50.0	181.0	64.7
150	21.9	55.1	16.2	93.2	53.6	174.0	62.1
160	23.4	55.1	17.3	95.8	57.2	168.0	59.8
170	24.8	55.1	18.4	98.3	60.7	162.0	57.8
180	26.3	55.1	19.5	100.9	64.3	157.0	56.1
190	27.7	55.1	20.6	103.4	67.9	152.0	54.4
200	29.2	55.1	21.6	105.9	71.4	148.0	52.9
210	30.7	55.1	22.7	108.5	75.0	145.0	51.7
220	32.1	55.1	23.8	111.0	78.6	141.0	50.4
230	33.6	55.1	24.9	113.6	82.2	138.0	49.6
240	35.0	55.1	26.0	116.1	85.7	135.0	48.4
250	36.5	55.1	27.1	118.7	89.3	133.0	47.5
260	38.0	55.1	28.1	121.2	92.9	130.0	46.6
270	39.4	55.1	29.2	123.7	96.5	128.0	45.8
280	40.9	55.1	30.3	126.3	100.0	126.0	45.1

*Please do not confuse this with the output cost per kw-hr. which remains practically constant throughout.

This table clearly shows that those costs which we have classed as the consumer's costs, which are the costs per customer for distributing the current generated, are the costs which concern the Central Station to a constantly increasing extent. The investment in meters and the length of line necessary to run to reach a customer, the location of meters to facilitate reading and details of this character will be of considerably greater importance to the station man than the efficiency of the generating apparatus.

It has been suggested to the writer that the customer's cost can be reduced 50% when several ends have been accomplished, among which is the universal adoption of a cheap meter, a current limiting device or something equivalent to either, or both, etc., etc. This is a matter of speculation, but it is interesting to observe from the table that such a 50% decrease would allow the Central Station to carry 180% more customers with the same gross cost, at which time, the cost per kw. would be no greater than at present, and at which time, the total average cost per customer (please do not confuse this with the customer's component of the fixed costs) on the basis of our assumption, would be decreased to 36% of the present total average cost per customer.

It is most interesting to note that when a station has added 80% more customers that its total cost will have again reached the present cost, but that the cost per kw-hr. will be about 60% greater than at present. It is most interesting, furthermore, in showing that even when the station again becomes fully loaded, the cost per kw-hr. will be about 25% greater than it is at present.

The effect of the high efficiency lamp has been to profoundly modify commercial practice. The possibility of these lamps being made more efficient as the weeks pass makes it necessary for the Central Station to adopt policies, programs and methods which not only will take care of the present high efficiency lamp situation, but which will provide for any increase in efficiencies in the weeks, months and years to come.

Ductile tungsten wire has been produced and it is a most reasonable expectation that the high class Tungsten filament lamps ultimately will be hardy and capable of satisfactory employment in houses or elsewhere where the supposed fragility has been argued against them. Every customer on a Central Station circuit will ultimately purchase and use lamps of this character.

The situation contains a menace and a promise, a menace which can not be ignored, a promise which must be fulfilled.

The menace is in the fact that the reduction in the cost of providing light to the average customer can never be so great as the customers expect.

He inevitably associates that two-thirds reduction in current consumed with a two-thirds reduction in cost.

The decrease in cost of furnishing light with the high efficiency lamp is almost entirely measured by the ability of the Central Station to take on additional consumers who can assist in bearing the fixed expenses.

The promise lies in the opportunity.

Never in the history of our industry has there been the opportunity which now presents itself to the Central Station for increasing the number of its customers, decreasing the cost to each of them, and increasing profit to itself, through the use of the high efficiency lamps.

226.2— EXTENSION OF SERVICE

NEW JERSEY

COMPLAINT V. PUBLIC SERVICE GAS COMPANY, Asking for Extension of Service in the Borough of South Bound Brook. Decision of the NEW JERSEY BOARD OF PUBLIC UTILITY COMMISSIONERS, Fixing Terms and Conditions. March 17, 1914.

In the case in which the question was involved of requiring the Public Service Gas Company to extend service into the locality of Dundee Lake, Saddle River Township, the Board discussed the general matters to be considered in ordering extensions (see 4 RATE RESEARCH 393-395). The decision in the present case is made in accordance with the former holdings.

Allegation is made that the respondent under its franchise is obligated to extend along any street within the Borough. But said franchise was not produced before the Board; and in the absence of proof, the Board cannot find that the franchise imposes an obligation upon the respondent such as the petitioners allege.

The case therefore resolves itself into a question of the probable cost of said extension and the net revenue likely to accrue to the Company therefrom.

In estimating the outlay upon which the Company is entitled to a reasonable return the Commission considered not only the cost of the extension, but also made an allowance for plant investment.

34—Rate of Return.

As remarked previously, if on these marginal extensions, the Company were compelled to accept a lower rate than the 8 per cent, adjudged hitherto as a fair rate of return, the average return would be lessened with every such extension.

Upon the facts disclosed in this hearing, the Board stands ready to order the extension in case the petitioners will afford the Company sufficient security that for each of the next five years the sum of \$108.89, or such part thereof as shall be necessary, in connection with the revenue from consumers along the desired extension, to afford a return of 8 per cent on the plant investment and to cover

the other costs as calculated by the methods approved herein will be paid to the Company. But in the absence of such assurance or guarantee, the conditions as disclosed will not warrant this Board in ordering the extension asked for by the petitioners.

NEW YORK (2nd D.)

EXTENSION OF MAINS OF WOODHAVEN GAS LIGHT COMPANY. Decision of the NEW YORK PUBLIC SERVICE COMMISSION (2ndD). Holding that the Company Cannot be Required to Make the Extension. February 3, 1914.

The proceeding was entered on motion of the commission, at the request of certain citizens, for the purpose of deciding whether or not the company should be required to extend its gas mains and service so as to furnish gas to the sections in the Borough of Queens, known as Aqueduct, Howard Estates, and Rambleville.

The argument that the service would not pay from the beginning, and that the company ought not to be required to build lines unless the income therefrom will pay from the beginning all expenses and a reasonable return upon that investment, is absurd. The statutory obligation to extend to premises within 100 feet of an existing main recognizes no such standard, and all progressive and enterprising companies are constantly building extensions which do not pay immediately. They expect to build up a business, and usually additional consumers are obtained from time to time who are induced to build or pipe their houses because mains have been laid. If the only objection were the uncertainty of immediate profit, the problem would be simplified; but there are also the risks which the company would be obliged to take in laying mains upon streets or so-called streets where there is no certainty that the entire layout of the street system will not be changed. . . .

In the matter of extension of mains, the obligation upon the company is an obligation to furnish reasonable service, all things being considered. There must be the prospect of a remunerative service within a reasonable time, and the likelihood that the company would be obliged to relay and rearrange its mains through this section and pay the cost of such work out of earnings, is most important and compels the Commission to decide, in view of other factors, that this section has not yet reached the stage of development which would warrant the adoption of an order directing the company to build the required system of mains in the present street layout.

COMMISSION DECISIONS

WISCONSIN

132—Protection from Competition.

CITY OF SHEBOYGAN VS. SHEBOYGAN RAILWAY AND ELECTRIC COMPANY, Application for a Certificate of Convenience and Necessity to Permit it to Construct a Municipal Lighting Plant. Decision of the Wis-

CONSIN RAILROAD COMMISSION, Denying the Application. March 27, 1914.

The private plant furnishing electric service in Sheboygan has changed owners and the Company is able and willing to install complete new lighting equipment capable of furnishing adequate and satisfactory light to the petitioning city.

The attitude of the Commission toward applications made for certificates of convenience and necessity to duplicate existing plants is well known. It rests upon the recognized fact that an existing plant can be made, under proper regulation, to give the public better service and at a lower cost than can competing plants. It requires no argument at this late day to prove that competing utilities in any municipality add to the service burdens of the public rather than lessen them. In the case under consideration there are reasons for not granting the application additional to the recognition of the general principle that two competing or non-competing utility plants are more expensive to the public than one plant. . . .

The decision then points out that the company is ready to provide adequate equipment.

In view of this expressed desire and until such new equipment has been installed and the service under the new conditions tested, it would be unjust to the city to burden it with the cost of a new lighting plant, as well as unfair to the new owners of the present lighting plant.

REFERENCES

RATES

611.1—Residence Lighting.

ELECTRIC LIGHT FOR THE POOR MAN'S COTTAGE. *Electrical Review*, 1½ page, April 18, 1914, p. 770.

This gives the details concerning an attempt which is being made by Mr. W. J. Fennell, borough electrical engineer of Wednesbury, England, to induce the industrial classes to use electricity for lighting. The houses are in blocks, and one electric service supplies from 5 to 15 houses. Three lamps are supplied, two 40-watt metal-filament (one for each downstairs room) and one 8-candlepower carbon lamp for the front bedroom. Estimates showed that an average of about 15 cents per week per house would easily cover all expenses or \$7.80 per annum, and the net profit has worked out at \$1.80 per annum per consumer, or about 25 per cent of the income, "a far better return than on any other class of consumers." The popularity of the scheme is unmistakable. Within 18 months the number of consumers has grown from 25 to 250.

650—Discrimination.

INHERITED DISCREPANCIES IN FARES. Editorial, *Electric Railway Journal*, April 11, 1914, p. 806.

This comments on the difficulties which electric railway managers often have in explaining the different fares on different lines, which have resulted from consoli-

ditions. It is pointed out that such conditions not seldom lead to charges of discrimination before public service commissions, and the defence of cases of this kind is usually burdensome. An explanation of the reasons which necessitate such differences in fare is given. It is said that actual estimates of service cost are more convincing as a rule than pro-rated car-mile expenses applied to a particular line, and when the former are considered in connection with the total earnings and expenses of the system, the best basis for a just decision is secured. The co-ordination of fares on consolidated lines is a subject bound to demand more attention in the future, but in the meantime the income and expense analysis of specific lines will do much to disarm hostility in dealing with inherited discrepancies.

INVESTMENT AND RETURN

310—Valuation.

NATURAL GAS VALUATION, by SAMUEL S. WYER. Abstract of a Lecture Given before the Ohio Gas Association, Columbus, Ohio, March 24, 1914. *Public Service Regulation*, 1 page, April, 1914, p. 195.

This is a consideration of the elements to be considered in appraising a natural gas property for rate making. The reproduction cost new method of valuation is advocated; and the statement made that book value, amount of outstanding securities, value assessed for taxation, franchise value, good will, earning power, and value of land for other than natural gas purposes, have no bearing on valuation for rate-making purposes.

310—Valuation.

PHYSICAL VALUATION OF RAILROADS, by L. R. POMEROY. Read Before the New England Railroad Club, April 14, 1914. Pamphlet, 59 pages.

This gives a resume of contributions upon the subject of physical valuation of railroads, illustrated and amplified by various tables and curves. Among the articles quoted are the paper by Mr. W. J. Wilgus, before the American Society of Civil Engineers, and the discussion of it; and the progress report of the special committee appointed by the A. S. C. E. to formulate principles and methods for the valuation of railroad property and other public utilities.

PUBLIC SERVICE REGULATION

265.—Co-operation of Public Service Companies with Regulatory Bodies.

FORM STATE ORGANIZATION. MICHIGAN TELEPHONE COMPANIES, AT SUGGESTION OF RAILROAD COMMISSION ESTABLISH ASSOCIATION—CHAIRMAN HEMANS ADDRESSES DELEGATES. *Public Service Regulation*, 3 $\frac{3}{4}$ pages, April, 1914, p. 191.

In this address Chairman Hemans traces the gradual change in the popular conception of utilities, from the early days when they were universally thought of as private concerns, to the present when highways are no more important than railways, sewerage systems, etc. A plea is made for co-operation. It is said that as between the utility which private capital brings into existence, which

the private citizen or corporation directs and manages, and the public which contributes to its support, the relation should be that of the co-partnership; a co-partnership in which the mutuality of interest, of obligations and responsibilities are clearly recognized and faithfully kept. Unfortunately, this has not always been the actual relation, but it is the ideal toward which the best thought of the nation is tending. We are slowly progressing from the public service corporation that resented supervision and control, that looked upon the public as the legitimate object of exploitation, to the public service corporation that is beginning to understand its duties and obligations to its public co-partner; that invests in its physical properties with the full consciousness that every dollar so invested is given a public character and charged with the mission of a public service; that invites the co-operation of its public partner through supervision and control by the public authorities, and whose officials recognize their public obligations, even though they act without oath of office or bond for the faithful performance of their duties. Likewise the intangible, though no less real, body called the public is beginning to better understand its relation to this utility co-partnership. It is beginning to ask through its legislatures and administrative commissions that it be not burdened by the economic waste incident to the duplication of public service facilities. It is beginning in places to scrutinize and to give greater protection to utility capitalization, and it is beginning to learn that for every hazard, either to investment or revenue, it suffers alike with the private investor.

222—Accounts.

MAINTENANCE AND DEPRECIATION, by A. F. WEBER. *Electrical World*, 1 page, April 11, 1914, p. 827.

This is a detailed explanation, given at the request of the *Electrical World*, of the methods prescribed by the New York Public Service Commission for the First District respecting maintenance and depreciation accounts, and the purpose of the commission in adopting such methods.

200—Public Service Regulation.

REGULATION OF PUBLIC SERVICE COMPANIES IN GREAT BRITAIN, by ROBERT H. WHITTEN. Reprint of Appendix G of the Annual Report of the New York Public Service Commission (1st D.) for the Year Ending December 31, 1913. Pamphlet, 231 pages.

This is a careful and discriminating discussion of the general principles underlying British methods of control of public utility matters, and of their applicability to American conditions. There is a complete analysis of the British sliding scale system for the automatic regulation of the rates of charge and dividends of gas companies. Results are given of a particularly searching inquiry into the proper basis for the apportionment of the savings or profits between the shareholder and the consumer. Dr. Whitten recommends certain changes in the sliding scale system as applied in England and Boston but on the whole considers that it has important advantages over the American system of occasional rate regulation. He, however, develops a new system of control which he calls "the merit rating method," and which he recommends as superior to either of the above. Under the merit rating method the state commission "will periodically rate the companies on the basis of comparative efficiency in serving the public and allow them to earn dividends varying with such efficiency." In connection with financial manipulation and control Dr. Whitten notes the general absence among English public service companies of the holding company and of the intertwining and interlocking of directorships for the purpose of common control. He suggests that the limited voting power of the large shareholder may be responsible for this condition. In various large public service companies there is a prescribed voting scale and no person no matter how large his holdings can have more than the prescribed maximum of votes (5, 10 or 30).

200—Public Service Regulation.

A REPLY TO MAX THELEN, by H. S. COOPER. *Journal of Electricity, Power and Gas*, 5 pages, April 11, 1914, p. 316.

This is a refutation of the paper by Mr. Max Thelen, "A Just and Scientific Basis for the Establishment of Public Utility Rates," abstracted in 4 RATE RESEARCH 143. With reference to Mr. Thelen's defence of the principal and agent theory, it is said that if his premises were fully and completely stated and if, upon such statement, they were found to be axioms, or absolutely proved conclusions from former theorems, there might be some basis for his conclusions; but, being imperfect, incomplete and unproven, any conclusion based on them must, necessarily, be the same. It is held that, if the relations between utility and public are anything at all they are those of co-laborers or co-partners. "Charters" and "franchises" are not merely permissive nor are they mandatory, they are, both of them, actual "agreements" between two willing contracting parties. With regard to Mr. Thelen's arguments concerning land values, it is said that if in any particular community the right of all private citizens to the unearned increment is assailed or taken away by the public, then the utility, as one of the citizens, should go into the same category, but to make a distinction of this character where the original transaction was identical and made in good faith by all parties concerned, is, virtually, confiscation, and not in accord with the course that should be pursued by a sovereign public where the other party has continued to act in good faith. It is a case where "might does not make right." It is asserted that the theories advanced are socialistic, and ultra-radical; and that before they are put into practice, their justice, equity, and feasibility should be proved.

MUNICIPALITIES**830—Public Ownership.**

AN EASY WAY TO RAISE RATES. Editorial, *Electric Railway Journal*, April 11, 1914, p. 805.

This states that Italy provides an example of what to expect in case of labor trouble under government ownership of railways. Faced by a threat of a strike involving 100,000 state railway employees, the premier has agreed to pension and wage increases that will cost \$3,000,000 annually, and he informed the Chamber of Deputies on Sunday, in what the press reports to be an off-hand manner, that this sum was "to be obtained by increasing the railway rates." The system here exhibited has at least the merit of simplicity and dispatch. There are no long drawn-out hearings and investigations such as are necessary here to adjust wages or to increase rates. But of course the money to pay for the premier's liberality will come out of the pockets of Italian travelers and shippers, and in the long run it is very doubtful whether or not they will enjoy repeated experiences of this character which, history shows, are to be expected under municipal or government ownership of public utilities.

830—Public Ownership.

GOVERNMENT TELEPHONES, by WILL PAYNE. *Saturday Evening Post*, 3 pages, April 18, 1914, p. 3.

This is a detailed description of the telephone situation in England under government ownership. It is said that there is no question that the fast, dependable service possible in the United States is not possible in England. The government telephone system has not such service to sell at any price. The difference between the situation in England at the time of the taking over of the National Telephone Company, and the situation in America is pointed out. As to results, it is said to be a fair statement that the British service, originally not good, has not im-

proved under government ownership. Rates have not been reduced; and the meager information so far available indicates that the government has made less profit from the lines than the private owners did. The growth of the power of the labor unions within the British postoffice department is brought out. It is said that the organized employees of the postoffice constitute a political factor that every political leader is bound to take into account. One may regard that as a good thing or a bad thing, according to taste and inclination; but it is a thing that must be taken into account in any consideration of government ownership in a democratic country. A large body of citizens who stand in a dual relationship to the government, first as its employees, then as voters, tends to create a rather difficult situation in any democratic country, especially if the employees are well organized, as they are in England, and therefore able to act promptly as a unit. Due to the comparatively small size of the British Government's trading enterprises, this is a much less dangerous fact than it would be in America.

830—Public Ownership.

THE PROPOSED GOVERNMENT OWNERSHIP AND OPERATION OF THE TELEGRAPH AND TELEPHONE SYSTEMS IN THE UNITED STATES, by J. HERON CROSMAN, JR. Read before the Pittsburgh, Pa., Telephone Society, March 2, 1914, and the Philadelphia, Pa., Telephone Society, March 18, 1914. Supplement to the *Telephone News*, March 15, 1914. Pamphlet, 25 pages.

This discusses the question of public ownership of telephones and telegraphs. There is a comparison of the service here and abroad, and the difference in conditions as affecting public ownership. There is an analysis of the figures and facts given by Congressmen Davis J. Lewis of Maryland to prove that they are inaccurate and misleading. In conclusion it is said that while it cannot be claimed that the United States has the best telephone service merely because it has the most telephones, the biggest switchboards, the longest lines, nor the most thoroughly trained operators; nor because it has invented and perfected unexcelled apparatus; nor even because it has the most capital to work with. It is the best in the world because it is the most widely available and the most widely used, and because it has for its operating forces men and women who are devoted to its advancement, and who have won and held their positions not by reason of political pull, but by reason of merit and ability, courage and steadfastness, training and aptitude for their work and loyalty to their chosen profession. It seems a far cry that the American public will ever consider seriously the irresponsible figures and illogical arguments of iconoclasts like those who are agitating the operation of this great commercial and social adjunct by a politically administered department of the government.

830—Public Ownership.

THREE CENT LIGHT IN CLEVELAND, by H. W. WILSON. The Bureau of Public Service Economics, New York. Pamphlet, 11 pages.

This analyzes the results of municipal ownership of electric lighting plants in Cleveland, to show that the three-cent rate recently fixed by ordinance for the municipal plants is not a practical rate. It is said that Cleveland's experience with municipal ownership may be briefly summed up as follows: (1) No electric current has ever been sold for residence lighting purposes at three cents per kilowatt hour. Municipal current for lighting purposes has never been sold at a rate averaging below approximately seven cents; (2) Municipal ownership has not affected the cost of street lights; (3) Cleveland's modern municipal plant, built in 1906 and serving only such contiguous territory as could be served most economically, built at a direct cost to taxpayers of \$306,665.75, has never paid a dollar of taxes, or a dollar of interest on the money taken from taxes; has received thousands of dollars of free service from other city departments supported by the taxpayers; has never returned to the city treasury a dollar of the money taken

therefrom, and is about to be scrapped, entailing a complete loss of a large part of the investment; (4) During eight years of municipal operation an average rate of nearly seven cents per kilowatt hour has been inadequate to cover cost of operation, maintenance and depreciation—to say nothing of interest and lost taxes. Therefore any statement that a municipal plant in Cleveland can or will be successfully operated at a three-cent rate, is a prophecy rather than a demonstrable fact.

GENERAL

738—Bibliographies.

SELECT LIST OF REFERENCES ON THE VALUATION OF PUBLIC SERVICE CORPORATIONS. Compiled by MARY M. ROSEMOND. Pamphlet, 25 pages.

This is a bibliography on valuation, compiled by the legislative reference assistant of the Iowa State Library, for the committee on railroad taxes and plans for ascertaining fair valuation of railroad property, of the National Association of Railway Commissioners.

980—Public Relations.

THE RAILWAYS APPEAL TO THE PUBLIC. Editorial, *Railway Age Gazette*, April 17, 1914, p. 866.

This draws attention to the fact that Senator Cummins, of Iowa, on Monday, on the floor of the Senate criticized the railways for carrying on a campaign to create a public opinion favorable to an increase in rates. He charged that in carrying on this campaign the railways have been misleading the public. It is said that it is true that the railway managements have been trying for years to change public sentiment toward the railways. The need for doing this was created largely by the flagrant misrepresentations of railway matters by muckrakers in the magazines and a certain class of public men from the Chautauqua platform. And among the public men who have most persistently and flagrantly misrepresented railway matters in public addresses is Senator Cummins himself. It is asserted that it is wrong for chairmen of state railroad commissions and United States senators to use the prestige of their official positions to secure dissemination of the grossest misinformation regarding railways for the purpose of influencing public opinion.

149—Holding Companies.

MR. TRIPP ON THE HOLDING COMPANY BILL. *Electrical World*, one-fifth page, April 11, 1914, p. 801.

This quotes Mr. Guy Tripp to the effect that the one criticism to be made of the Clayton bill is the revival of the idea that "lessening competition" constitutes a violation of the Sherman anti-trust act or any other law (unless it goes so far as to create a restraint of trade or constitutes a monopoly). A practice which lessens competition is not in itself contrary to the highest standard of business ethics, nor does it menace in any degree the public welfare unless it reaches a point where it restrains or monopolizes trade. This language and the still more comprehensive language in some others of the "Five Brothers" bills, sustains the theory of free and unrestricted competition, disregarding the fact that such practices are the surest foundation for monopoly. It is unnecessary to cite instances of monopolistic corporations having been built solely by the use of the weapons of free competition. Restraint of trade and monopolies should be prevented, but elimination of useless competition by co-operation is in almost numberless cases not only desirable from the standpoint of the parties themselves, but distinctly in the interest of the public in that it prevents unnecessary waste, and co-operation of this character should not be prohibited by statute.

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Rate Research

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Rate Research

Vol. 5

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No. 5

For statement of facts and opinions contained in papers abstracted herein, the Association does not hold itself responsible

COMMISSION DECISIONS

WISCONSIN

540—Minimum Charge.

THE APPLICATION OF THE MILTON WATER LIGHT AND POWER COMPANY for Authority to Put in Effect a Minimum Charge for Electric Service. Decision of the WISCONSIN RAILROAD COMMISSION, Granting the Application. March 27, 1914.

In some cases the Commission has recommended the adoption of a minimum charge of less than 75 cents, but from a consideration of all the facts available in this case, we believe that the application for authority to put in a minimum charge of 75 cents per month is a reasonable one.

PENNSYLVANIA

132—Protection from Competition.

Application of the SCHUYLKILL LIGHT, HEAT AND POWER COMPANY for Approval of an Ordinance Granting it the Right to Furnish Electric Current for Light, Heat and Power in the Borough of Ashland. Decision of the PENNSYLVANIA PUBLIC SERVICE COMMISSION, Dismissing the Application. April 10, 1914.

The Eastern Pennsylvania Light, Heat and Power Company furnishing service in Ashland, protested the granting of the application. The Commission found that the Eastern Pennsylvania Company could furnish and had been furnishing adequate service and that public convenience and necessity did not require the entrance of a second company into the field. In this case, the question of the advisability of admitting competition is presented to the Pennsylvania Commission for the first time. The decision says:

No doubt it is the expectation of the municipality that by reason of the competition in this way introduced, a lesser rate for service will be secured.

Section II of Article III of the Act of July 26th, 1913, provides that "no contract or agreement between a public service company and any municipal corporation shall be valid unless approved by the Commission," and Section 2 Article III of the same Act provides that "[u]pon the approval of the Commission evidenced by its Certificate of Public Convenience first had and obtained, and not otherwise,

EDITORIAL NOTE.—All indented matter is direct quotation.

it shall be lawful for any proposed public service company (b) to begin the exercise of any right, power, franchise or privilege under any ordinance, municipal contract or otherwise."

It is plain that the approval by the Commission and the giving of its Certificate of Public Convenience involves the determination by the Commission that the carrying into effect of the proposed contract would be for benefit of the public. Does it appear that the approval of this contract would result in such benefit? The passage of the Act of July 26th, 1913, and of similar Acts in nearly all of the other States indicates a general judgment that a reliance upon competition between public service companies for securing adequate service and proper rates has not been successful and that hereafter supervision by properly constituted authorities is to be substituted. Long experience has shown that while the temporary effect of competition between public utilities occupying the same territory is to lower rates, the final is likely to be the absorption of one by the other and then an increase of rates to pay the expense of the warfare. The experience of Ashland which once had two or three competitive companies all of them absorbed by the strongest is an illustration. The municipality in the case of companies furnishing light is burdened with the inconvenience and difficulties which arise from the presence of duplicated poles and wires and finally has to pay at least a reasonable return upon the increased capital required by such duplication. The question always is by what means can the public convenience be best served. It may well be that occasions will arise when because of some fundamental defect in the service by the company in the occupancy of the territory due to inadequacy of plant, want of financial strength, or other reason, the public would be benefited by the introduction of a competing company. Such cases can be determined upon their own merits as they arise. No such difficulties are met with in the present case. The Eastern Pennsylvania Light, Heat & Power Company has occupied the territory for twenty-nine years. Its plant is adequate. It has supplied the municipality and the people during the entire period with comparatively little complaint. Should its rates be unreasonable, discriminatory or unduly burdensome it is always within the power of the Commission upon proper complaint to control them and afford relief.

The Commission is of the opinion that the introduction into the municipality of the poles and wires of a second company organized for purposes of competition would be at least of doubtful utility. The approval of the ordinance is therefore withheld and the application for its approval is dismissed.

INDIANA

300—Investment and Return.

THE CITY OF UNION CITY, RANDOLPH COUNTY, INDIANA, vs. THE UNION HEAT, LIGHT AND POWER COMPANY, Asking for the Determina-

tion of Reasonable Rates for Natural Gas. Decision of the INDIANA PUBLIC SERVICE COMMISSION, Fixing Rates. February 7, 1914.

Although this decision concerns a natural gas property, certain of the holdings are applicable to the valuations of any public utility property.

312.1—Physical Property.

The Company has a certain amount of unused pipe and asked that its value be included in the Commission's valuation. The Commission considered it as non-operating property and dismissed the question as follows:

The Act, Section Nine, provides that: "The Commission shall value all the property of every Public Utility actually used and useful for the convenience of the public." Such a valuation is contemplated for any purpose, whether for rate making or public purchase. We think the law is well-defined in re La Crosse Gas and Electric Company, case 8 W. R. C. 138, which holds, "That when unused property may be disposed of without affecting the business, the only warrant for its retention is expected savings and additional net income.

This being the case, an addition to the physical value of the plant for non-operating property can be justified for rate making purposes, only when the net income expected therefrom is added to the actual income or is deducted from the operating expenses. This case further decides that the simplest equitable method would be, it seems, not to consider these investments in the determination of rates.

We believe the safe rule is: That unused property, when not employed as an emergency or reserve unit, should not be included in a physical valuation for rate making purposes. There is not sufficient evidence that this is property used and useful for the convenience of the public, to warrant its incorporation in the appraisal.

312.9—Paving Over Mains.

The evidence further shows that all the pipe under paved streets had been laid before the streets were paved and it does not show that such pavement was made at the expense of the respondent. We think it clear that since the Company was not burdened with this expense, they should not be allowed to add it to the value of the plant, and thereby assess the public for a charge never incurred by them. Since the life of this plant is only estimated at eight or ten years, for the production of natural gas, it is unlikely that this pavement will have to be taken up and relaid by the Company in the installation of new mains.

This position has been taken by the Iowa Court in Cedar Rapids, 144 Iowa 426, which decision was affirmed by the U. S. Supreme Court in 223 U. S. 665. Both the Public Service Commission of New York in *Malien vs. Kings Co. Lighting Company*, 2 P. S. C. 1st D. (N. Y.), and the Wisconsin Railroad Commission in *City of Ripon vs. Ripon Light and Water Co.*, 5 W. R. C. 1, are in accord with the Iowa case, *supra*.

314—Overhead Charges.

An allowance of 12% has been added to the physical value, for emergency, superintendence, interest during construction, contingencies, etc.

315.1—Going Value.

Going value is the potential business value, the amount of which must be determined by the net income which a plant in operation can produce, in excess of that which a substitute plant of like character can produce, the construction of which is begun at the time of valuation the annual excess income being reduced to present worth. Thus while going value on one side depends upon the earnings of the plant being valued, it is dependent on the other side upon the rate at which it would be possible for a new, or substitute plant, to acquire business in the same, through a clear field, beginning with the time the valuation takes place. In other words, it is the difference in earnings of the plant in question and the probable earnings of a substitute plant with all its business to acquire between the time of valuation and that time in the future when their revenues are supposed to become equal, that constitutes the measured going value. (Whitten P. 502.)

It would seem that the respondent Company in its long operation as a monopoly should have recouped itself for early deficits, during the formative period in its development, especially since it has had power to regulate its own rates, and it seems to have done this. Rates have been materially advanced at least four times and we must presume that their rates were so increased as to meet any deficit growing out of early operation and pioneer development. . .

In the Cumberland Telephone and Telegraph Company vs. City of Louisville, 187 Fed. 637, the Court holds substantially that if fair value for rate making purposes is based on cost of reproduction, less depreciation, due recognition is given to the fact that the property is a going concern.

INDIANA**300—Investment and Return.**

Application of the HOODLEY TELEPHONE COMPANY for an Increase in Telephone Rates at Gosport, Indiana, Decision of the INDIANA PUBLIC SERVICE COMMISSION, Authorizing the Increase. January 12, 1914.

The company's rates had been fixed by the franchise granted by the town of Gosport. The Commission found that under these rates the company was operating at a loss and found that the proposed increase was justifiable.

224.5—Rates Fixed by Contract.

The answer to this petition raised a question by implication, and that is this. The town of Gosport having granted this company a franchise to conduct this telephone business at a certain rate and,

it having been accepted, should not the company having made this contract, with its eyes open, abide by it?

In Section 101 of the public utility commission act, it is prescribed. "Any public utility operating under an existing license, permit or franchise, shall, upon filing, at any time prior to the expiration of such license, permit or franchise, and prior to July 1, 1915, with the clerk of the municipality which granted such franchise and with the Commission, a written declaration, legally executed, that it surrenders such license, permit or franchise, receive, by operation of law, in lieu thereof, an indeterminate permit as provided in this act; and such public utility shall hold each permit under all the terms, conditions and limitations of this act."

In the case City of Gary, Indiana, vs. Gary Interurban Railroad Company, the question is met and disposed of in the following manner. "It would appear to be the law that in all matter touching the granting of franchises the power of the legislature to change, alter or rescind the franchises so far as the city itself is concerned is full, complete and perfect. It is simply the power of the principal over its agent. As the franchise was granted by the city, acting as an agent only, it, the city, has no right in the franchise, except as it represents the right of its principal. If the principal, at any time, for any reason satisfactory to itself, chooses to withdraw from the contract, abandon its rights or forego its benefits, the city granting the franchise has no right to be heard, and its contentions can in no wise prevail as against the State. The legislature being the supreme guardian, the principal in the transaction, has absolute and full control of the entire matter, and can do as it elects to do, even over the protest and objects of its agent, the city. In this particular instance, the State has the right by its legislature to say that all the benefits and advantages that accrued to the city as the agent of the State may be abandoned. If it chooses to say that and does say it, the city of Gary is helpless, and its protests and objections can avail nothing.

This is the full philosophy and theory of the indeterminate permit mentioned in the Shively-Spencer Utility Commission Act."

"By virtue of the provisions of the above quoted section, the State exercises its inherent and sovereign right to pass directly over the head of its agent, and to deal with the other contracting party, the utility, and to say to such utility, even over the protest and objection of its agent, the municipality, that if such utility will surrender its franchise and submit itself to the just regulation of this Commission, that the State will forego all the advantages and benefits it has received under the franchise. Now, what right has the city to object if the principal chooses to forego its advantages; of what avail is the opposition of the agent? The answer is none. The power to offer to the utility the option of surrendering its franchise and its benefits and advantages and accepting the indeterminate permit, is clear in the light of the foregoing authorities, and

the foregoing reasoning. It is a just exercise of a lawful power on the part of the State. The only other question involved in this controversy is, has the State by any act of its legislature since the granting of the franchise herein involved enacted any law by which it agrees to surrender any advantage it has obtained under such franchise? We maintain that it has not. It has offered in Section 101, and other sections touching the indeterminate permit, the option to the Gary Interurban Railway Company of surrendering its franchise and submitting itself to the regulation of this Commission, and, in consideration of its so doing, to relieve such company of the liabilities and burdens imposed upon it by this franchise. So far, the railway company has declined to avail itself of this opportunity; but it is insisted that the provisions of the Shively-Spencer Utility Commission Act, touching discrimination in the sales of service, has rendered it unlawful for the railway company to longer comply with the provisions of this franchise. This position cannot be maintained."

713—**FILING OF SCHEDULES****PENNSYLVANIA**

The Pennsylvania Public Service Commission issued an order April 9, 1913, requiring all public service companies subject to its jurisdiction to file with the Commission not later than June 1, 1914, all rate schedules which were in effect January 1, 1914.

ILLINOIS

The Illinois Public Utilities Commission issued an order January 6, 1914, requiring all schedules which were in effect at that time or which had been in effect at any time since July 1, 1913, to be filed not later than February 1, 1914.

COURT DECISIONS**NEW JERSEY****220—General Powers of Commissions.**

WEST JERSEY & S. R. Co. vs. BOARD OF PUBLIC UTILITIES COMMISSIONERS. Mandamus to Require the Commission to Approve a Proposed Lease. Decision of the SUPREME COURT OF NEW JERSEY Denying the Application. February 21, 1914. 89 Atlantic 1017.

The decision of the Commission in this case, denying the company's application for a 999 year lease to the Pennsylvania Railroad Co., was abstracted in 4 RATE RESEARCH, 43.

The position taken by the relator is that the board is confined to determining whether the conditions under which the statute authorizes a lease exist, and whether the statutory procedure has, in all respects, been followed, and that, if the statute is construed to vest broader powers in the board, it delegates legislative power in violation of the Constitution. . . . The Public Utility Act does not delegate to the board the determination of whether

the leasing of the road of one company to another shall be sanctioned, without prescribing a general rule by which such board should be governed in reaching its determination. On the contrary, the Legislature by the Public Utility Act has attached to the exercise of privileges and powers granted by it, the condition that, in the exercise of such privileges and powers, the determination of the board that the limitations and restrictions to which such privileges and powers are subject have not been exceeded, shall be first had. That it may lawfully do. It is not only within the power, but is also the duty, of the board to require that the instrument by which such privileges and powers are proposed to be exercised shall be so framed as to put it beyond reasonable doubt that such limitations have not been exceeded.

REFERENCES

RATES

624—Power Factor.

POWER-FACTOR OF ALTERNATING CURRENT CIRCUITS, by G. M. BROWN and N. SHUTTLEWORTH. *General Electric Review*, 7 pages, May, 1914, p. 451.

The authors have presented a very complete and interesting discussion of an important practical problem confronting the central station manager. Formerly, the question of power-factor was no problem because the loads were chiefly lighting or railway. However, the past ten years has seen a rapid industrial development. For all classes of this work, the induction motor has taken the lead until now we find on many systems that the induction motor load is larger than the lighting load. The authors have described English practice in particular. In America, both the synchronous condenser and phase advancer are in successful use. On this side we have been forced by our long high voltage lines to the general use of the synchronous condenser with its excitation under automatic control, this arrangement giving automatic voltage control as well as automatic phase or power-factor control. These machines are in operation in various sizes up to 15,000 kv-a. The phase advancer has only recently been developed in this country and reports on it are most encouraging.

611—Light.

THE LIGHTING SITUATION IN MINNEAPOLIS, by CLYDE LYNDON KING. *National Municipal Review*, 1 page, April, 1914, p. 380.

This contends that Minneapolis is one of the cities of the United States that is handling its own lighting problems without any aid from a state public service commission. The statement is made that its experience shows what a city can do in the way of getting reasonable rates and efficient service if civic standards be but adequately enlightened. The terms of the city's contract with the gas company and a brief sketch of the history of the gas regulation, is given. Rates paid by the city for electric street lighting since 1912 are shown. It is said that one reason for the relatively low price conceded by the company for 1914 (\$60) is the fact that the city is continually extending its crematory lighting system and that the completion of the high dam in the river between the Twin Cities will possibly put the company out of the street lighting business in two or three years. Over the Minneapolis General Electric, as over the gas company, the city has complete power through its franchise. The power and lighting rates for retail commercial lighting range from 8 cents per kilowatt-hour for the first 100 kilowatt-

hours per month to $4\frac{1}{2}$ cents per kilowatt-hour for all over 600 kilowatt-hours per month. The retail power rate varies from 6 cents per kilowatt-hour for the first 200 kilowatt-hours per month to 3 cents per kilowatt-hour for all over 600 kilowatt-hours per month.

600—Rate Differentials.

PUBLIC UTILITIES AND PUBLIC OPINION, by G. R. PARKER. *General Electric Review*, $4\frac{1}{2}$ pages, May, 1914, p. 482.

This is an article dealing with the relationship between the public and public utilities. The author defines public utilities and notes specially that they are dependent upon the public. The author points out that some industries by their nature should be monopolies where competition in others is desirable. The regulation of public utilities by means of commissioners is dealt with, and it is pointed out that the regulation of such is for the benefit of all concerned. The public is protected against inefficient service and exorbitant rates, while the public utilities are guarded against the granting of franchises which would lead to the unnecessary duplication of service in one district. The author pays considerable attention to rate making, explaining the general underlying principles, and pointing out the various factors which make rate differentials necessary. It is said that close study leads to the conclusion that most public utilities, even without the stimulus of competition, are making a constant effort to let the public share the benefits resulting from improvement in the art, and to give the community greater value for each dollar it expends.

INVESTMENT AND RETURN

360—Depreciation.

MAINTENANCE AND DEPRECIATION. *Electric Railway Journal*, 2 pages, April 18, 1914, p. 881.

This includes four communications in response to the editorial in the *Electric Railway Journal* of March 21 (see 5 RATE RESEARCH 13) on the great variation in maintenance and depreciation charges made by different companies operating under more or less equal conditions. The question is discussed from the point of view of the engineer, the company executive, and the public accountant. There is a general consensus of opinion that a uniform method of handling maintenance and depreciation is at once desirable, and difficult to bring about.

310—Valuation.

AN INTERESTING COURT DECISION ON "DEVELOPMENT COST" AND "UNEARNED INCREMENT." Editorial, *Engineering and Contracting*, April 22, 1914, p. 459.

This notes that the decision of the New York Court of Appeals in the Kings County Lighting Case, makes New York the first Eastern State to adopt the Wisconsin method of determining going value. It is said that the most important part of the decision relates to "going value" or "development cost." The court holds that the accrued deficit in fair return constitutes the development cost or "going value." It is held that while this is beyond question true, the court has failed to note that this theory of arriving at development cost does not even accord with the "cost of reproduction theory" of appraising property. It does not even accord logically with the court's decision that the company is entitled to have all increment in land treated as an additional profit and not as an ordinary income. In brief, the court has failed to see that the "development cost" theory is part and parcel of the agency theory of public utility control, which agency theory is a relatively new theory that cannot be made entirely retroactive without leading both to injustice and inconsistency. The "Wisconsin method" of determining development cost is a logical deduction from the agency theory, but courts

and commissions usually fail to ask by what right a company can be forced to make an accounting today for all its previous acts when in truth it was not an agent in the present sense of that term. The statement is made that until commissions and courts see clearly that there are at least two theories of rate control there can be no consistency in the various decisions involving appraisals and rates. There are two clearly separate theories: (1) The Agency Theory and (2) the Competitive Theory. There is a third that is a mixture of the two, and it is this third theory that has actually prevailed for many years, and is still in active existence even in such states as Wisconsin. In some measure public service companies have been treated as public agents and in some measure they have not. In so far as they exercise powers of eminent domain they are public agents. But in so far as they are forced to engage in cut-throat competition with other companies, and indeed, with municipally owned plants, they are not public agents.

360—Depreciation.

RELATION OF DEPRECIATION ALLOWANCE TO INTEREST ON INVESTMENT. Editorial, *Electrical Review*, April 25, 1914, p. 805.

This contrasts the straight line and sinking-fund methods of making allowance for depreciation. It is said that the distinction of the difference in status of both capital and depreciation accounts in these two cases is frequently overlooked and as a result two errors commonly arise. One of these is to use the straight-line method for figuring the amount to be set aside for depreciation and to continue to charge interest upon the original capital investment. A realization of this relation has given rise to one of the common methods of determining the present value of an investment, namely, by subtracting from the reproduction value the amount of accrued depreciation. The other error is to use the sinking-fund method in making allowance for depreciation and then, without realizing the fundamental distinction between this and the former method, to similarly deduct the accepted depreciation from the capital account or from a valuation for rate-making purposes. The latter is an injustice to the investors in a utility property, since the entire capital representing original or reproduction cost is still tied up in the business, and the amount representing accrued depreciation is not earning separate interest, but must form a part of the depreciation fund. The annual allowance for depreciation will depend upon the method used. This forms one element in rate-making. Unless a corresponding distinction is made in the capital account upon which fixed charges must be figured, it is evident that a different result must be reached as to the proper value for a rate. This of itself is sufficient evidence that a distinction should be made in figuring fixed charges in the two cases, since two methods can both be correct only when they give the same results.

372—Employees Profit Sharing.

PROFIT SHARING AND LABOR COPARTNERSHIP. *Daily Consular and Trade Reports*, 1½ pages, April 22, 1914, p. 413.

This discusses a report which has been published by the British (Government) Board of Trade on profit sharing and labor copartnership abroad. It points out the different classes of business in various countries in which there has been profit sharing or labor copartnership. It makes the assertion that in the United Kingdom a very large number of schemes still provide for the payment of the bonus simply in cash, while in the most recent schemes, particularly those of the gas companies, the plan of giving work people facilities for the purchase of shares in the undertaking is largely adopted. Neither of these systems has anything like the same importance in France. The typical French system is that of capitalizing the bonus; and, of the various methods by which this can be effected, that which finds most favor is the method of converting the accumulated bonuses into a "patrimoine"; that is to say, a capital sum sufficient to provide a pension for the employee after his retirement, and also something to leave to his widow and children after his death. It concludes that profit sharing has seen very few successes in Germany and Switzerland and, on the whole, is not looked upon with favor in the United States.

PUBLIC SERVICE REGULATION

260—History and Development of Regulation.

FEDERAL RELATIONS COMMITTEE REVIEWS PENDING NATIONAL LEGISLATION AFFECTING ELECTRIC RAILWAYS. *Aera*, 1 page, April, 1914, p. 995.

This enumerates the bills affecting electric railways, which have been introduced in the House; and describes the general content of each bill.

200—Public Service Regulation.

OVERLOADING STATE UTILITY COMMISSIONS. Editorial, *Aera*, April, 1914, p. 921.

This states that whatever may be said as to the desirability of state or national regulation of public utilities, the administrative difficulties are unquestionably enormous. The amount of detail work put upon the commissions of the various states, by the public utility laws, is so great that it is questionable whether any of these commissions is even yet equipped, to make available for intelligent use the vast mass of information, which the utilities are compelled to furnish them. While regulation is, of course, not administration, in many instances, in some of its aspects, it is fast approaching it and in consequence the detail assumed by the commissions is swamping their forces, clogging their machinery and is responsible for those delays, which are hampering to the Companies, annoying to the public and costly to the State.

252—Commission Annual Reports.

PUBLIC SERVICE COMMISSION REPORTS, by RALPH E. HEILMAN. *National Municipal Review*, 2 $\frac{3}{4}$ pages, April, 1914, p. 408.

This gives a brief summary and criticism of the latest reports of the Commissions of Ohio, Wisconsin, New Jersey, Massachusetts (Gas and Electric), Maryland, Rhode Island, Oklahoma, Connecticut, New Hampshire, Washington, New York (1st and 2nd D), and St. Louis.

211—Appointment.

APPOINTMENT OF MR. DANIELS, Editorial, *Electric Railway Journal*, April 18, 1914. p. 858.*

This points out that the long delay in the Senate over the confirmation of the appointment of Winthrop More Daniels of New Jersey as a member of the Interstate Commerce Commission was an object lesson to the country of the lack of fairmindedness which characterizes some of those who occupy prominent positions in the national government. The opposition to Mr. Daniels was enlightening. It was based on the fact that the New Jersey Board of Public Utility Commissioners, of which Mr. Daniels was a member, rendered a decision in the Public Service Gas Company case in which it made an allowance for non-physical values. The fact that the values are real and that the cost of them was just as tangible as the cost of any item of physical property entering into the investment were superfluous details to the objecting Senators. They pressed the charge that the New Jersey decision unduly favored the company, because it made an allowance for values that were not physical.

200—Public Service Regulation.

THE FUTURE OF PUBLIC UTILITIES, by THOMAS N. McCARTER. Abstract of an Address before the Finance Forum of the Y. M. C. A., New York, April 13, 1914. *Electrical World*, Article and Editorial, 1 $\frac{1}{4}$ pages, April 18, 1914, p. 864 and p. 853.

The above article discusses the relation of public and utilities, and offers a vigorous protest against the prevalent distrust of utilities and utility officials. There

is a consideration of the effect of too stringent regulation upon securities, and of various mooted questions in valuation. It is asserted that franchises should not be limited in term; that there is now no valid objection to a perpetual franchise in view of the regulating tendency of the times. Such franchises should contain provision for periodical review to insure compliance with their provisions. It is stated that the chief objection to municipal ownership is furnished by the unsatisfactory results of municipal administration in this country. The theories of federal and state government have worked out well in the country, but this is not true of the city governments. Here graft, incompetent selection of officials and other evils have been conspicuous. When one considers the responsibilities already on the shoulders of municipal officials, he concludes that they are enough. The editorial characterizes the lecture as the kind of frank discussion that will help the public to understand that there is a side different from the one presented by politicians. The corporate side is entitled to as fair a hearing as is the agitator's side.

211—Qualifications, Appointment.

COMMISSIONERS WHO LEAVE OFFICE. Editorial, *Electrical World*, April 18, 1914, p. 853.

This states that the question of what becomes of men who retire as public service commissioners concerns both the public and the companies. Few, if any, state officials have the opportunity that is before public service commissioners of acquiring a knowledge that may be definitely valuable after retirement from office. Their experience is a valuable training of whose benefits the community ought not to be deprived. If the public is so foolish as to let capable commissioners leave office, the corporations ought to be wise enough to seek the knowledge available in these trained men. There is no logical reason why an able, broad-minded man should not honestly and acceptably serve either public or corporation freely. By reason of his familiarity with the corporate side, he can better serve the public as its representative. Similarly, his experience as a public servant better fits him to be a corporation official. Until the public learns enough to keep good commissioners there will be frequent changes. One of the best public servants that New York State ever had was the first chairman of its Second District Commission. After his retirement Mr. Stevens became counsel for the New York Central and Hudson River Railroad, advising it on questions of valuation. That is a proper and conspicuous application of a practice which is to be warmly commended.

MUNICIPALITIES

840—Public Operation.

RAILWAY RETURNS, NEW SOUTH WALES. *Daily Consular and Trade Reports*, 1 page, April 22, 1914, p. 403.

This comments on the fact that the largest single enterprise conducted by the Government of New South Wales is the system of railroads and street railways, which represent practically the whole of the overland transportation facilities available. The few miles of private lines are inconsiderable and serve only certain agricultural or mining requirements. A table is given showing details of earnings and working expenses for the years ending June 30, 1912 and 1913. The Railroads show a surplus of \$2,034,095 in 1912, and \$909,569 in 1913. The street railways show a surplus of \$280,778 in 1912, and a loss of \$157,046 in 1913. It is said that the details in the table show how heavy are the State's commitments in respect to railroads, which, in view of the population of less than 2,000,000 souls, may seem disproportionate. The 1913 figures are not so encouraging as those for the preceding years, and the deficit shown on street railway operation is significant. The increased working costs in 1913 are undoubtedly attributable to higher wages and salaries required by awards of the wages boards, and in a less degree to improved classifications granted to technical and clerical staffs.

810—Municipal or Local Regulation of Utilities.

SMALL MAJORITY IN FAVOR OF "HOME RULE" AT CHICAGO ELECTION. *Electrical World*, $\frac{1}{8}$ page, April 18, p. 866.

This states that a question of public policy presented to the voters of Chicago at the election of April 7 was the following: "Shall the State Legislature amend the act creating a state public utilities commission, approved June 30, 1913, so as to provide for home rule and control by the city of Chicago of public utilities within the city?" Much to the surprise of the politicians, the magic of the "home-rule" cry in public utility regulation was not so effective as had been contended. The vote was in the affirmative, but the majority was so small that the effect on the Legislature will probably not be great. The figures were: Yes, 176,850; no, 168,682. Women voted as well as men, but their negative votes were almost in the same proportion as those of the men.

830—Public Ownership.

MUNICIPAL STREET-LIGHTING PLANT IDEA SCORED AT SPRINGFIELD, MASS. *Electrical World*, $\frac{1}{6}$ page, April 18, 1914, p. 857.

This states that in connection with the purchase of 1,500 acres by the city of Springfield, Mass., last week on the Little River watershed to augment the local water supply, a plan to develop a hydroelectric plant for municipal street lighting has received considerable discussion. Prof. Harry E. Clifford, of Harvard University, street-lighting expert of the municipality, was asked to give his opinion of the proposed municipal plant scheme a few days ago, and in forcible terms he said that the city would do far better to make a new contract with the United Electric Lighting Company than to enter upon the unprofitable task of attempting to generate and transmit its own energy in competition with the efficient local central-station system. Professor Clifford said that it would cost the city at least \$3,000,000 to build underground ducts and install the necessary street-lighting cables, and further said that municipal operation would be unsuccessful if applied to the lighting and motor service of the famous "Municipal Group" of public buildings on Court Square. Attempts have been made within the past two or three months to establish an isolated plant for this service. In analyzing the bids, Professor Clifford pointed out that no allowance had been made for auxiliary machinery and that the present boiler equipment is insufficient for electric requirements.

840—Public Operation.

RESULTS OF GOVERNMENT OWNERSHIP OF RAILWAYS IN FRANCE, by VIRGIL T. LEAK. *Stone & Webster's Public Service Journal*, 16 pages, April, 1914, p. 253.

This states that government ownership of railways in France has been tried on a small scale since 1877 and on a large scale since January 1, 1909. In neither case has it proved successful, either financially or from the point of view of the service rendered. The old road which was bought in 1877, although short in length, has never given satisfactory service from the time of its purchase, but it never attracted widespread public attention until its apparent climax of inefficiency was reached in the years from 1909 to 1912. The author goes into some detail, and gives tables showing that the deficits from 1908 to 1913 have steadily increased.

830—Public Ownership.

MUNICIPAL PLANTS' POWER RATES. Editorial, *Journal of Electricity Power and Gas*, April 18, 1914, p. 341.

This states that municipal ownership of public utilities is favored because of certain advantages which will accrue to the people; the most important always being a reduction in rates. The value of such a "reduction" should first be noted for if statistics show that this is actually brought about, the worth of the reduction

is an important factor in deciding the desirability of municipal ownership. The expenditure of the average citizen for utility service approximates ten per cent of his income, about two per cent being spent for light. The city lighting plant, the latest bauble of the public craze, might therefore be made to save this average citizen the expenditure of one per cent of his income by reducing his lighting bill fifty per cent. But statistics issued by the Bureau of the Census, and recently made public, point to the fact that the municipal electric light plant is non-successful in effecting reductions. The figures given are not final, or applicable to any locality any more than is the statement that municipal ownership because successful in one place must necessarily be successful in another. They do, however, reasonably suppose the existence of concrete arguments which should be advanced against municipal ownership in general and urge the introduction of cogent analysis to take the place of superficial statements, based upon the possibilities or impracticableness of municipal ownership in the United States because of its success or failure abroad.

831—Purchase by Municipality.

OBSCURING THE ISSUE. Editorial, *Journal of Electricity Power and Gas*, April 18, 1914, p. 340.

This discusses the campaign now in progress in Los Angeles to condemn the property of the power companies and generate electric power from the municipal aqueduct system. Attention is drawn to the fact that United States government statistics do not in general bear out the statement that "the distribution by the city of its own electricity will result in cheaper electricity in the homes," resulting in "lower electric light bills all over the city;" and that, to substantiate the condemnation proceedings, the management of the Los Angeles municipal plant would have to guarantee to excel, since one of the power companies in question has the highest load factor of all comparable companies in the United States.

GENERAL

980—Public Relations.

SQUARE DEAL FOR PUBLIC SERVICE MEN. *Electric Railway Journal*, April 18, 1914, p. 857.

This comments on the speech by Mr. Thomas N. McCarter, referred to on page 76 of this issue. It states that public utility officials are as good a class of citizens as any other and that there is no reason why a public service official should be considered a criminal simply because of the position which he occupies. It asserts that the attitude of apecticism, displayed by a part of the public toward the utterances of railway managers, is extremely unfortunate from the educational standpoint because it cuts off the supply of information from the only source from which first-hand data can be secured. It can be removed only by a tedious process of truth dissemination and by object lesson after object lesson. Theoretically the public should be willing to give the corporation a square deal; but the public is an enormous mass of individuals largely incoherent unless compacted by some momentous and threatening issue. The officials personify the utility in the public mind. They must possess personality and ability to command confidence.

980—Public Relations.

THE RELATION OF THE CONSUMER AND THE INVESTOR TO PUBLIC UTILITIES. *Stone & Webster's Public Service Journal*, 3½ pages, April, 1914, p. 247.

This notes that the introduction of public regulation has not changed the fundamental relations between the consumer and the investor; the trade between the two is still a voluntary one, and the ultimate success or failure of public regulation depends on a clear recognition of this fact. The ascertion is made that public regulation will fail unless it is carried out along lines which satisfy the reasonable desires of both the consumer and the investor. It is pointed out that the great

problem now before public regulating authorities is to determine what are the reasonable desires of the consumer and of the investor, and how these can best be met. It is said that the consumer desires: a—Adequate service for all reasonable demands of the community; b—A high standard of service, as regards both reliability and quality; c—The adoption of all reasonable precautions to prevent danger to life and property; d—Rates and charges free from discrimination, and as low as are consistent with the first three requirements. The investor desires: a—A franchise or grant of sufficient security and length to justify investment of his capital; b—The right to capitalize all expenditures reasonably incurred in creating the property and its business as a going concern.

910—Promotion and Growth of the Business.

THE DEVELOPMENT OF ELECTRIC TRACTION, by JOHN R. HEWETT. *General Electric Review*, 6 pages, May, 1914, p. 462.

This states that the urgent need for more rapid and better means of physical communication between nations and between sections of the same country has been responsible for the development of our modern transportation systems, to the extent where they have become absolutely indispensable to our present modes of living. Transportation requires energy, and there are only two suitable forms of energy that can be economically transported or transmitted to a distance from the source, electric energy and the chemical energy of coal. The flexibility and simplicity of the former and its ready and efficient conversion into mechanical energy render it greatly superior for almost all cases of energy transmission. The question of the electrification of steam railroads, however, is one of pure economics—whether it is cheaper to build a distribution system for the whole length of the line, or to carry the fuel and converting apparatus along with the train in the shape of a steam locomotive. A brief review is made of existing systems of electrification, and an argument is advanced to show that the so-called "Battle of the Systems," instead of hindering development as is contended by some, must of necessity work to its advantage, as only by attacking the problem from all sides can the best of which the art is capable be produced.

COURT DECISION REFERENCES.

226—Service.

ERIE R. CO. v. BOARD OF PUBLIC UTILITY COMMISSIONERS. Decision of the SUPREME COURT OF NEW JERSEY, February 25, 1914. 89 Atlantic 1001.

The New Jersey Commission issued an order requiring certain railroad companies to furnish drinking water on each passenger car "the schedule of which shows that one half hour or more is required to run from the starting point. . . within the state to the last stop in the state." The Court sets the order aside holding that the evidence in this case does not justify a hard and fast order to supply water on all trains with a schedule run of half an hour.

112—Franchises.

PEOPLE EX REL CITY OF KEWANEE ET AL. v. KEWANEE LIGHT & POWER CO. Decision of the SUPREME COURT OF ILLINOIS. February 21, 1914. Rehearing Denied, April 9, 1914. 104 Northeastern 680.

Laws 1897 of Illinois, p. 100, provides that councils in cities shall have no power to grant the right to lay gas pipes for the distribution of gas for fuel or lighting or string on poles any wires over which electricity for lighting is to be used, except on petition of the owners of land representing more than one-half of the frontage on the street or alley which is sought to be used for the purpose mentioned. Since the company in this case held no franchise, procured as the result of such a petition, the city sought to oust it from the streets. The Court holds that the statute is special in its application; and since laws regulating the use of the streets of cities and villages throughout the state must be general in their operation, it is unconstitutional.

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May 6, 1914

No. 6

RATE RESEARCH



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Rate Research

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Rate Research

Vol. 5

CHICAGO, MAY 6, 1914

No. 6

For statement of facts and opinions contained in papers abstracted herein, the Association does not hold itself responsible

COMMISSION DECISIONS

WISCONSIN

300—Investment and Return.

Application of the STEVENS POINT LIGHTING COMPANY for Authority to Increase Rates. Decision of the WISCONSIN RAILROAD COMMISSION, Requiring Improvements in Service and Fixing Rates, April 15, 1914. The Commission on its own motion investigated the service of the company and ordered that the company comply with the standards of gas and electric service prescribed by the Commission. A valuation of the company's property was made and the revenues and expenses investigated. The usual apportionment between the fixed or demand expenses was made as a basis for determining rates varying with the monthly consumption. The company was ordered to put in effect the following schedule of rates.

72—RATE SCHEDULES.

COMMERCIAL LIGHTING.

Rate.

12 cents net or 13 cents gross per kilowatt-hour for the first 30 hours or less used per active kilowatt connected per month.

7 cents net or 8 cents gross per kilowatt-hour for the next 60 kilowatt-hours or less used per active kilowatt connected per month.

5 cents net or 6 cents gross per kilowatt-hour for all current used in excess of 90 kilowatt-hours per active kilowatt connected per month.

Determination of Active Connected Load.

Active connected load shall be computed according to the following classification of consumers' premises and by the percentages specifically designated.

Class A. Residences, private rooming house, hotels, etc. Where the total connected load is 500 watts or fraction thereof 60 per cent of the total connected load shall be deemed active. Where the installation exceeds 500 watts, 33½ per cent of the total installation over and above 500 watts shall be deemed active.

Class B. Banks, offices, etc. Where the total connected load is equal to or less than 2.5 kilowatts 70 per cent of such load shall be deemed active. For any installation over and above 2.5 kilowatts 55 per cent of that part exceeding 2.5 kilowatts shall be deemed active.

Class C. State, county and municipal buildings, churches, factories, etc., 55 per cent of the total connected load shall be deemed active.

Prompt Payment Discount.

The difference between the gross and net charges shall constitute the discount for prompt payment.

EDITORIAL NOTE.—All indented matter is direct quotation.

Minimum Charge.

50 cents net or 60 cents gross per consumer per month.

POWER RATE.**Rate.**

10 cents net or 11 cents gross for the first 15 kilowatt-hours used per active kilowatt connected per month.

4 cents net or 5 cents gross for the next 45 kilowatt-hours used per active kilowatt connected per month.

2 cents net or 3 cents gross for all current used in excess of 60 kilowatt-hours per active kilowatt connected per month.

Determination of Active Connected Load.

90 per cent of the first 10 horse power connected shall be deemed active.

75 " " " " next 20 " " " " " " " "

60 " " " " " 30 " " " " " " " "

50 " " " all over 60 " " " " " " " "

Prompt Payment Discount.

The difference between the gross and net charges shall constitute a discount for prompt payment.

STREET LIGHTING RATE.**Rate.**

\$54.00 per arc lamp per year provided that the City of Stevens Point contracts for the service of 90 or more lamps.

920—Economy and Efficiency.

The lighting company purchases the entire output of the Stevens Point Power Company at a flat rate per annum. It was found that under this arrangement current is obtained at approximately 1 cent per kilowatt-hour. The decision says:

The average cost of power generation for 42 Class B electric utilities, hydraulic, steam or combined methods being used, is about 2.3 cents. It would seem that on account of the interdependent relations sustaining between the two companies, no basis for an equitable charge for current had as yet been devised, necessity having forced no issue on that point. Hence it would appear that the book charge, for the purposes of a rate investigation, is not necessarily conclusive; and that, on the contrary, the Commission could no more justify an acceptance of such an entry as conclusive, the facts appearing otherwise, than it could recognize as proper an unreasonably high amount merely because such an entry appeared on the books of the company. . . .

Investigation showed that the present arrangement makes possible a lower cost than other methods upon which the company would have to rely if deprived of the present source of supply, and in conclusion the decision says:

Such a saving having been shown, the equity of a division between the consuming public and the producing owner naturally follows. Briefly

stated, the principle is that the public, in consideration that it forego competitive conditions in favor of a monopoly, is entitled to a share of the saving resultant from the more economical operation. The decreased cost of service under such conditions, is well recognized and is of course mainly due to non-duplication of costly plant and line equipment. The right of the company to such a share arises from its devotion to public use of that which, privately exploited, would be more remunerative. Under all of the foregoing circumstances it is believed that the lighting company is entitled to an additional allowance of \$3,000 for power generation. . . .

WISCONSIN

540—Minimum Charge.

Application of the MCGOWAN WATER, LIGHT AND POWER COMPANY for Authority to Establish a Minimum Charge. Decision of the WISCONSIN RAILROAD COMMISSION, Fixing a Minimum Charge. April 14, 1914.

The applicant is a joint water and electric utility. An examination of the company's accounts indicates that the utility has been operating at a considerable loss. The Commission says that it is impracticable to increase the total revenues of the utility by means of a minimum charge. The company asked that a minimum charge of \$1.00 be established and in regard to the reasonableness of that particular charge the decision says:

The cost which is properly chargeable as a consumer expense is not the only item which should be considered in determining the minimum charge. The effect upon the business must also be taken into consideration, and in this case we believe that a \$1.00 minimum charge would be inadvisable. It is evident, however, that some minimum charge should be put in, and we believe that a charge of 75 cents per month will be a proper one.

NEW YORK (2nd D.)

650—Discrimination.

APPLICATION OF THE ELLICOTTVILLE ELECTRIC LIGHT COMPANY for the Establishment of a Uniform Rate for the Sale of Electricity at Ellicottville. Decision of the NEW YORK PUBLIC SERVICE COMMISSION (2nd), Holding that the Company may Equalize Rates Without Authorization by the Commission. March 24, 1914.

The company has been charging consumers, who subscribed for service before a certain date, seven cents and other consumers ten cents per kilowatt-hour. The petition asks for authority to charge all consumers the ten cent rate.

Obviously, the charging of two rates for the same service is an unjust discrimination under the Public Service Commissions Law and is therefore unlawful. . . .

Electrical companies are not required to come to this Commission for authority to advance their rates. The Ellicottville Electric Light Company may make all of its rates ten cents without receiving

the sanction of this Commission. While under the law it is the duty of this electric light company to charge its customers the same rate for the same service, there is no complaint here against the ten cent rate, and as before stated, the Ellicottville Electric Light Company may equalize these rates without first obtaining consent from the Commission. . . .

ILLINOIS

224.5—Rates Fixed by Contract.

FRANK PORTER VS. LOUISVILLE & NASHVILLE RAILROAD COMPANY, Claiming Right to Free Transportation According to Contract between the Parties. Decision of the ILLINOIS PUBLIC SERVICE COMMISSION, Dismissing the Petition. April 10, 1914.

According to an agreement between the parties, the railroad company was to have granted the petitioner an annual pass or free transportation over all lines within the state of Illinois, covering a period from February 22, 1913, to December 31, 1916, in settlement for certain damages to the petitioner's land caused by the construction of the company's road-bed. The company notified the petitioner that free transportation could not be continued for the reason that it is prohibited by the recently enacted Public Utilities Law. The petitioner asked the Commission to require the company to issue the transportation in accordance with its agreement. The Commission dismissed the application, holding that private contracts were superseded by the Public Utilities Law. The decision says:

The intent of the Legislature in passage of this section of said Act [Section 37] evidently sought to prevent a public utility from receiving either greater or less or different compensation from any corporation or person than that offered by its schedule to any other corporation or person.

If petitioner could lawfully claim that he is entitled to transportation by reason of his contract with the Railroad Company then this Commission would be compelled to recognize the contractual relations of parties, made with public utilities with reference to service. Such a view of the law would defeat one of the purposes for which the Act was passed.

It is urged in support of the petition that a refusal by this Commission to recognize the validity of, and to be governed by the terms of the contract entered into by the petitioner and the Railroad Company would be violative of the provisions of both the Federal and State Constitutions relating to existing contracts. This Commission does not agree with such contentions.

We hold that the said contract so entered into by the petitioner and the Railway Company cannot prevail over the inherent power of the state to exercise its authority through a public utility commission to fix and determine reasonable and just rates for such service. To hold

otherwise would allow a public utility to contract with third parties for service or commodities in such a manner as to defeat the purpose of the law and nullify the power of the state to regulate its public utilities.

Contracts such as the one under consideration here, are presumed to have been made in view of the possible exercise by the state of its higher power through legislative enactment for the regulation and control of public utilities.

COURT DECISIONS

OKLAHOMA

224—Rate Regulation.

PIONEER TELEPHONE AND TELEGRAPH CO. VS. CITY OF BARTLESVILLE. Suit to Enjoin the Company from Increasing its Rates, Pending the Fixing of a Schedule by the Corporation Commission. Decision of the SUPREME COURT OF OKLAHOMA, Adjudging That the Court Has No Jurisdiction. August 6, 1913. Rehearing Denied, March 31, 1914. 139 Pacific 694.

The Pioneer Telephone Company, Bartlesville, Oklahoma, was enjoined from increasing telephone rates, until the Corporation Commission should take action on an application, which had already been made by the city, for the fixing of a schedule of rates for the company. The company appealed and the decision is reversed.

It could not be questioned, upon reason or authority, that an order by the court that the company should, until otherwise ordered by the court, charge only the rates named by the court would be the exercise of a legislative function. An order by the court that it shall charge only a given schedule of rates until otherwise ordered by the Corporation Commission is an exercise of no different character of power. No legislative power in this respect has been conferred upon the district courts of the state.

CALIFORNIA

129.4—Refunds.

PACIFIC GAS & ELECTRIC CO. V. CITY AND COUNTY OF SAN FRANCISCO. Suit to Restrain the Enforcement of an Ordinance Fixing Rates. On Application of Defendant to Impound Certain Funds Pendente Lite. Decision of the DISTRICT COURT, N. D. CALIFORNIA, Denying the Application, and Ordering the Company to Give Bonds. December 17, 1913. 211 Federal 202.

. . . . (The) question presented is how best to maintain the status quo and preserve the respective rights of the parties, without injustice to either, while the validity of the ordinance remains in suspense. The Court follows the method adopted by the District Court of Arizona in *Bonbright v. Geary et al.*, and *Kelley v. Geary et al.*, 210 Federal 44 (See 4 RATE RESEARCH 376), of requiring the Company

to furnish bond sufficient to cover the difference; to report to the clerk of the court on the first of each month the amount collected from consumers and the amount which would have been collected under the rates fixed by the suspended ordinance; and in case of a final decree against the company, to pay the amount of excess collections with interest to a special master. It is pointed out that, where the impounding method is used, the Court is, in case of prolonged litigation, shouldered with a great risk, in caring for a large sum of money; and the company, in being deprived of the use of money, suffers an injustice in case the final decision is in its favor. The Court asserts that the method it adopts

would certainly seem to be more in accord with the principles of equity than that which may be had under the impounding requirement.

224—Rate Regulation.

The city asked that the company be prohibited from collecting rates in excess of those fixed by the board of supervisors for the previous fiscal year of 1912-1913. The court would not be justified in making such a modification. The ordinance fixing rates for that year has expired by limitation, and those rates, therefore, no longer exist as legal rates. For the court to so modify the order would be tantamount to itself undertaking to fix a rate, a thing which it may not competently do. Moreover, since the rates for that year, or the latter half of it, were substantially the same as the rates fixed by the present ordinance, such a modification would be practically equivalent to determining on this preliminary motion the substantive question involved in the controversy—whether the rates of the present ordinance are such as to furnish adequate compensation for the service.

MASSACHUSETTS

831.1—Municipal Bond Issues.

CHAPIN ET AL V. TOWN OF LINCOLN ET AL. Suit to Enjoin an Issue of Waterworks Bonds to Reimburse the General Fund for Moneys Expended on Waterworks Extensions. Decision of the SUPREME JUDICIAL COURT OF MASSACHUSETTS, Granting the Injunction. March 31, 1914. 104 Northeastern 745.

The town proposed to reimburse itself by a bond issue, for the money spent for construction purposes on the waterworks.

The municipality owns the water system, and the disbursements it made for construction purposes were actually payments of its own indebtedness. Under existing legislation applicable to the defendant one of the departments cannot occupy the relation of debtor to the town of which it is an integral part. See *Sinclair v. Mayor of Fall River*, 198 Mass. 248, 84 N. E. 453. . . . There is no indebtedness incurred or contemplated by the town to warrant the proposed loan. There is no unfunded debt on account

of the extensions referred to. It does not follow that because the town might have borrowed the money for these extensions at the time they were voted, that it can do so now after they are paid for. . . .

840—Municipal Operation.

It appears that since March, 1904, the town treasurer has kept an account of the money received from and paid on account of the water system, separate from the account of the other departments; and apparently some attempt has been made to treat the water works as a self-sustaining business enterprise.

NEW JERSEY

132—Protection from Competition.

EASTERN TELEPHONE AND TELEGRAPH CO. v. BOARD OF PUBLIC UTILITY COMMISSIONERS. Suit to Compel the New Jersey Commission to Approve the Exercise of Franchises in Certain Territories Already Served. Decision of the SUPREME COURT OF NEW JERSEY Upholding the Commission's Decision. February 25, 1914. 89 Atlantic 924.

The Commission's decision in this case is abstracted in 3 RATE RESEARCH 275. The company applied for approval of two franchises, granting it the right to extend its service in the county of Cape May, and in the borough of Avalon.

The commissioners found as a fact, that the territory through which it is proposed to extend the relator's telegraph and telephone lines is now adequately served by a telephone company, and upon such finding adjudged that neither of the proposed lines were necessary and proper for the public convenience, and that they would not properly conserve the public interests, and therefore refused approval. As there was evidence to support the finding of fact that the proposed telephone and telegraph lines were not necessary and proper for the public convenience and to properly conserve the public interests, that question of fact we cannot review.

228.1—Approval of Franchises.

The relator argues that, because certain statutes authorize municipalities to grant the permission and consent to erect poles for the purpose of telephone or telegraph operations, the power of the utility board is limited to supervising the exercise by the relator of the power conferred upon it by the municipalities. The Legislature has the power to impose further restrictions or limitations upon the powers delegated to municipalities, and the question is whether it has done so by the act creating the board of public utilities approved April 21, 1911 (P. L. 374) section 24, of which declares: "No privilege or franchise hereafter granted to any public utility as herein defined, by any political subdivision of this state, shall be valid until approved by said board." Since the adoption of this statute, the grant of such privilege or franchises by a municipality is not valid, unless approved

by the board of public utility commissioners. By the terms of this act, the board is not required nor authorized, to approve, until it determines that the privilege for which approval is sought is necessary and proper for the public convenience and in this case the board have found that such condition does not exist.

REFERENCES

RATES

614—Heating and Cooking.

METHODS AND COST OF ELECTRIC HEATING. *Electrical World*, $\frac{1}{2}$ page, April 25, 1914, p. 943.

This is a consideration of the best methods of electric heating, and its cost. In regard to cost, it is said that to compete with coal at from \$10 to \$11 per long-ton, electricity must sell at about 0.25 cent per kilowatt-hour, omitting the stand-by losses in a heating system using coal. When heat is supplied during only a small portion of the time, these losses are considerable, so that an economy may still be effected when the energy rate is as high as 2 cents or 3 cents per kilowatt-hour. If a 400-hp. boiler is used, electricity at from 3 mills to 5 mills per kilowatt-hour would be equivalent to coal at \$10 per ton in producing heat. Successful competition with coal may become possible if heat can be stored in water during off-peak periods.

400—Rate Theory.

CONTRIBUTION TO THE STUDY OF ELECTRIC RATES. (CONTRIBUTO ALLO STUDIO DELLA TARIFFICAZIONE DELL'ENERGIA ELETTRICA) by RENZO NORSIA. Reprint of a Paper Presented to the 17th Convention of the Italian Electrotechnical Association, Rome, Italy, November, 1913. Pamphlet, 28 pages.

This paper covers many important questions connected with rate making as apportionment of fixed charges among different classes of service and among different customers of the same class, as power customers or light customers; differential rates, etc. The question of apportionment of fixed charges is thoroughly discussed. The writer states that methods which are commonly used by different authors are incorrect, and shows how better methods of apportioning can be arrived at. A new method of prorating fixed charges among different loads (as power, light, and railway load) is given. Diversity factor is extensively discussed and formulas, giving relations of individual customer charges to class and customer's load factor, are developed. Finally a simple method of computing a multiple differential rate for large customers is explained.

610—Character of Service.

CENSUS OF POWER IN FACTORIES. *Greater New York*, 4 pages, April 6, 1914, p. 11.

This describes, and gives the results of, a power census recently made by the Edison Electric Illuminating Company of Brooklyn with view to getting a more accurate and authentic record of the present industrial development, and the prospects for future growth than has been published heretofore in any statistics or census publications. The article is accompanied by a table showing in detail the number of plants engaged in each industry, the division of the plants between the electrical or mechanical method of drive and the total amount of power used in each industry.

410—Cost of Service.

THE DECREASING COST OF POWER. Editorial, *Electrical Review*, May 2, 1914, p. 855.

This goes to show that the increase in efficiency of steam turbines has acted to decrease the cost of power not only in the lesser requirements for coal and coal-storing and coal-handling facilities, but also indirectly from its effect upon the fixed charges for buildings and steam equipment. It is pointed out that this applies only to the cost of power at the point of generation; that the cost of power utilized involves a considerable outlay for distribution expense, which sometimes involves a transmission line.

513—Meter Basis.

METERED VERSUS UNLIMITED SERVICE TO OFFICE-BUILDING TENANTS. *Electrical World*, $\frac{1}{2}$ page, April 25, 1914, p. 934.

This comments on the growing tendency toward giving the office building tenant the option between having his electricity metered to him or paying for it with other service in the flat rental charge; and indicates the advantages to the central station of the metered over the unlimited service.

INVESTMENT AND RETURN

360—Depreciation.

THE DEPRECIATION OF PUBLIC UTILITY PROPERTIES AS AFFECTING THEIR VALUATION AND FAIR RETURN. Discussion, by JOHN W. ALVORD, *Proceedings of the A. S. C. E.*, 8 pages, April, 1914, p. 1227.

Reference to Mr. Alvord's paper and the previous discussion of it, has been made in 4 RATE RESEARCH 175, 313, and 380. Mr. Alvord here selects for review, as typical, two of the discussions, one of which has apparently assented to the propositions contained in his paper, and the other of which has dissented therefrom.

310—Valuation.

DISCUSSION OF VALUES FOR THE PURPOSE OF RATE-MAKING. *Proceedings of the A. S. C. E.*, 114 pages, April, 1914, p. 1107.

This continues the discussion of this subject, earlier installments of which have been noted in 4 RATE RESEARCH 94 and 175. The following here contribute to the discussion: F. Lavis, H. C. Phillips, William W. Crehore, M. R. Maltbie, Henry Floy, V. K. Hendricks, William J. Wilgus, Richard T. Dana, R. S. McCormick, Richard J. McCarty, A. W. Buel, J. E. Willoughby, S. S. Roberts, C. P. Howard, James D. Mortimer, Charles S. Churchill, M. H. Brinkley, H. M. Stone, S. Whinery, Philip W. Henry, Charles Hansel, and D. W. Lum.

PUBLIC SERVICE REGULATION

222—Accounts.

REPORTS OF COMMITTEES ON ACCOUNTING, MISSOURI ELECTRIC, GAS, STREET RAILWAY AND WATER WORKS ASSOCIATION, April, 1914.

These are the reports of the three committees on Depreciation, Historical Matters and Classification of Small Companies appointed by the Missouri Electric, Gas, Street Railway and Water Works Association, in connection with the action taken by the Commission toward formulating a uniform system of accounting. The

report of the committee on depreciation considers the deduction of depreciation reserve from the fixed capital account and the seeming intention, as set forth in the tentative classification, to consider the depreciation reserve as a fund on which interest must be annually set aside. The Committee recommends that the Commission be petitioned to consider the depreciation reserve as a reserve account, as is now done in New York. The Committee enumerates several objections to considering the depreciation reserve as a fund on which interest must be set aside. The adoption of this measure, it is claimed, would increase the cost of service to the rate payer as only a low rate of interest can be obtained on securities of immediate market value, and would be an impossible requirement considering the financial conditions of some companies. In concluding its report, the Committee asks to be continued until after it should be advised by the Commission as to its intentions in these matters.

132—Protection from Competition.

THREE COMMISSIONS RULE AGAINST COMPETITION. *Public Service*, $\frac{1}{2}$ page, May, 1914, p. 156.

This comments on the recent decision of the Georgia Commission in the Macon case (see 4 RATE RESEARCH 371); of the Illinois Commission in the Bethany Mutual Telephone Co. case; and of the Pennsylvania Commission in the Ashland case (see 5 RATE RESEARCH 67).

224—Rate Regulation.

NEW YORK FARE LAW VETOED. News Item and Editorial, *Railway Age Gazette*, May 1, 1914, p. 995 and 973.

The above article and editorial recount how Governor Glynn, of New York, has vetoed a bill, which had been passed by the legislature, which would have required the New York, New Haven & Hartford and the New York Central to comply with an order of the Public Service Commission (2nd D.), issued January 31, 1913 (see 4 RATE RESEARCH 41), reducing passenger fares to and from New York City. The order of the Commission had been declared illegal by the Appellate division of the Supreme Court on the grounds that the Commission had not investigated all of the facts of the case and had not specifically declared the higher rates, adopted by the company, to be unreasonable; and the governor bases his veto on the fact that the question is now before the Court of Appeals on appeal. The governor declares that legislation to forestall a decision by the court is wholly unjustifiable. Moreover the Public Service Commission, which prescribed the lower rate, now advises the governor that he ought to veto the legislative act, reminding him that Governors Hughes, Dix and Sulzer had all refused to approve proposed legislation to fix rates for transportation, holding that questions of that kind were for the Public Service Commission to deal with.

MUNICIPALITIES

820—State Regulation of Municipal Utilities.

REGULATION OF PUBLIC UTILITIES IN WISCONSIN. AN ANALYSIS OF THE SYSTEM AND THE RESULTS. Published by the MINNESOTA HOME RULE LEAGUE. Pamphlet, 46 pages.

This analyzes the decisions of the Wisconsin Commission, to prove that in Wisconsin public service regulation has been a self-evident failure. A return to the "wholesome principle of home rule" is predicted, "leaving to the people of the municipalities to determine for themselves questions that concern only themselves; working out their local problems in their own way free from outside interference; and in the process acquiring self reliance and capacity for self-government. This is the foundation principle of the American system of democratic

government; and the only system which will assure permanent conditions of honesty and efficiency in administration and genuine government by the people."

830—Public Ownership.

THE PRESS AND PUBLIC OWNERSHIP. *Public Service*, 3 pages, May, 1914, p. 153.

This gives newspaper comment and cartoons published subsequent to the recent proposal that the government take over the telephones and telegraph.

810—Municipal or Local Regulation of Utilities.

A THREE-CENT CAR FARE TEST, by WILLIAM G. DEACON. *Public Service*, 6 pages, May, 1914, p. 141.

This outlines the history of the electric railway situation in Toledo, and recounts in detail the events of the present campaign. The stand taken by Mr. Doherty is explained; and the provisions of the franchise suggested by the company wherein the company offers to turn over the Toledo Street Railway system to the city for a year's test, to determine if the three-cent fares are practical, are discussed.

840—Public Operation.

LOS ANGELES POWER BOND ELECTION ON MAY 8, by BURT A. HEINLY, *Engineering News*, 2 pages, April 30, 1914, p. 986.

The author, who is connected with the Los Angeles Aqueduct, presents the city's side in the controversy over the proposed issue of \$6,500,000 bonds for the partial development and distribution of electric power as manufactured from the power drops of the Los Angeles aqueduct.

840—Public Operation.

A MILLION A YEAR OFFERED FOR LOS ANGELES AQUEDUCT POWER. *Electrical World*, $\frac{1}{8}$ page, April 25, 1914, p. 912.

This states that the electric generating companies of Los Angeles, the Southern California Edison Company, the Los Angeles Gas & Electric Corporation and the Pacific Light & Power Corporation have agreed to buy all of the energy generated by the Los Angeles aqueduct power plants. In a formal offer the companies agreed to pay the city a wholesale price to be set by the State Railroad Commission, amounting to at least a million dollars. This is with the full understanding that the City Council will protect the people by fixing a low retail rate. As an alternative the companies have offered to enter into a co-operative arrangement with the city for the public use of their complete distributing systems for five years, the city to make rates, all contracts with consumers, read all meters, handle all money and collect all bills. The companies will receive only the sum determined by the State Railroad Commission as equitable. It is pointed out that either of the offers will materially reduce tax burdens; and that co-operation between the city and the companies for five years will greatly improve Los Angeles' financial standing.

830—Public Ownership.

VILLAGE CLOSES MUNICIPAL ELECTRIC-LIGHT PLANT. *Electrical World*, $\frac{1}{8}$ page, April 25, 1914, p. 934.

This states that Westerville, a town of 1600 inhabitants about 15 miles from Columbus, Ohio, has recently discontinued the operation of its 100-kilowatt municipal electric-lighting plant and is now receiving service from the mains of the Columbus Railway & Light Company. Energy is delivered to the town at 13,200 volts and is sold to the town itself at a wholesale rate and retailed by the town to the former customers of the municipal company over the existing distribution system.

GENERAL

920—Economy and Efficiency.

MUNICIPAL REFUSE SORTING AND UTILIZATION PLANT, PITTSBURGH, PENNSYLVANIA, by STERLING H. BUNNELL. *Engineering News*, 4 $\frac{1}{2}$ pages, April 30, 1914, p. 980.

This purports to show how the largest municipal refuse sorting and utilization plant in the United States, having a nominal capacity of 100 tons per day, receives, sorts out, bales and packs rags, paper, bottles and cans for marketing, burns the tailings in high temperature destructors, utilizes destructor heat to raise steam to generate electric current for works purposes and ultimately for sale. The article is accompanied by illustrations and diagrams showing details of the plant.

910—Promotion and Growth of the Business.

MR. INSULL ON THE CENTRALIZATION OF ENERGY SUPPLY. Abstract of an Address before the Y. M. C. A., New York, April 20. Article, *Electrical Railway Journal*, April 25, 1914; and Article and Editorial, *Electrical World*, April 25, 1914, p. 917 and p. 910.

This address, which is along the same lines as Mr. Insull's paper before the Franklin Institute (see 3 RATE RESEARCH 14) and his address made last year before the Commonwealth Edison section of the N. E. L. A., presented a strong argument for the greater centralization of power supply. Mr. Insull stated that the electrical business is essentially a monopoly business. The economics of the situation demand a centralized supply of energy if the most economical results are to be obtained, if capital and labor are to be conserved, and if the prime sources of power, whether coal or water, are to yield the very best possible results for the user in low price and for the producer in yielding a proper, fair return on capital. It would seem that the day will come when regulating bodies will question the waste of capital, fuel, and efficiency that goes on where the production of energy is not centralized. There is a discussion of the different classes of customers supplied by the Commonwealth Edison Company and the effect of a diversity factor on the cost of energy production. It is pointed out that the rule is almost invariable that as the income per kilowatt-hour goes down the output per capita goes up. Cost follows the line of income and the load-factor shows a decided improvement. In regard to commission regulation, the speaker held that it is unreasonable to expect that the community should allow a business of the kind described to go on without regulation. Assuming that regulation is intelligent, the investor and the user have nothing to fear from it. If the companies are not managed well enough to square with public opinion, the commission is there to protect the public. If the community is so ill advised as to treat the company unfairly, the commission is there to protect the company. Admitting that commission regulation is an inconvenience to men who deal with large properties, Mr. Insull still maintained that regulation is the best thing that has happened to the electrical industry in the last few years. He believes that in the long run regulation means protection.

149—Holding Companies.

PUBLIC UTILITY HOLDING COMPANIES, by W. C. JENKINS. *Public Service*, 3 $\frac{1}{2}$ pages, May, 1914, p. 149.

This states that no one factor in the operation of public utilities has been more important during recent years than the so-called holding company. Such corporations are not organized to stifle competition, but to give the benefit of expert engineering aid and financial assistance and metropolitan service to scattered plants whose existence otherwise would not be justifiable. It is true that these isolated plants may constitute a monopoly in each particular instance but practically all political economists agree that monopoly under sane regulation is the only prudent method of operation. The history of the development of the holding

company is traced, and its advantages cited. It is said that from a financial point of view, it cannot be questioned that a utility property whose operation is directed by a holding company that is sound financially and is efficiently and economically managed, affords a more inviting investment than the same property would if operating independently.

980—Public Relations.

PUBLIC POLICY OF PUBLIC UTILITY CORPORATIONS, by JOHN A. BRITTON. A Paper Read Before the San Francisco Section of A. I. E. E. *Journal of Electricity, Power, and Gas*, 3½ pages, April 25, 1914, p. 356.

In this article the author emphasizes the importance of the individual employe in the carrying out of a successful public policy and states the basis on which that policy would be formulated.

980—Public Relations.

MODERN PUBLIC POLICIES OF PUBLIC SERVICE CORPORATIONS, by P. T. CRAFT. Read before the Iowa Street and Interurban Railway Association, April 23-25.

This is an analysis of the present-day public policies of utilities, of the reasons therefor and the results thereof. Special emphasis is laid upon the importance of the personal equation. With regard to the relations between public service corporations and government bodies, it is asserted that business-like and dignified dealing, without fear or favor, will eventually overcome any prejudice which may exist, with the final result that both parties concerned will approach each negotiation with open minds and each will gain by the transaction. Any self-seeking politician members of such bodies, whether or not they constitute a majority, must eventually cease persecution of any corporation if the latter earns a reputation for square dealing, good service, and a desire to please its patrons. The constituents of such politicians must eventually enforce justice.

980—Public Relations.

REGULATION AND EDUCATION. Editorial, *Electrical World*, April 25, 1914, p. 909.

This emphasizes the need of educating the public in utility matters, so that regulation, which must necessarily reflect public opinion, may be just. It is said that public opinion must be formed and then properly translated into law. Not only for their own private interests, but as a patriotic duty, public utility men must undertake this educational work, which must be done frankly in the open. Incidentally the teacher will have nearly as much to learn as the pupil. More than all, it must be done so that the public will acquire an increasing amount of respect for the honesty of purpose of the public utility men. When properly carried out regulation is of great benefit to both the utilities and the public, their interest being identical in almost all respects. The necessity and desirability of regulation by commissions having been established firmly, the problem of the moment is the education of the public and the utilities concerning each other's needs, in order that the commissions may determine what is of greatest benefit for all.

950—Progress in the Art.

HIGH VOLTAGE PLANTS OF THE WORLD. Chart and Editorial, *Electrical World*, April 25, 1914, p. 911.

This is a chart with descriptive comment gathered by Mr. Selby Haar on the transmission plants throughout the world which operate at exceptionally high voltage. The line between high voltage and extra high voltage was drawn somewhat arbitrarily at 70,000 volts. The primary reason for this is that to include plants at 40,000 to 70,000 volts would enormously complicate the table without leading to particularly valuable conclusions as to high-voltage practice, since many of the

systems of less impressive voltage are old and small, and to include them would give an inaccurate idea of the present situation. Moreover, 70,000 volts is about the line at which the pin-type insulator reaches the limit of its usefulness. Looking over the table as a whole, it furnishes extremely striking evidence of the progress that has been made.

910—Promotion and Growth of the Business.

IS THERE A SATURATION POINT IN THE SALE OF ELECTRICITY? by J. S. FORBES. Address Before the Iowa Electric Light Association, Cedar Rapids, April 22-24.

This is a consideration of ways and means of increasing sales in the small town. It is asserted that the saturation point is reached only when every house, store, and factory in a given town is equipped with every kind of current-consuming device.

910—Promotion and Growth of the Business.

CONCENTRATION IN POWER SALES. Editorial, *Electrical World*, May 2, 1914, p. 854.

This states that one of the essentials in extending central-station power service is the ability to concentrate upon particular features of the local power situation, spotting the weak points of the existing service and emphasizing the fitness of the electric drive as a means of bettering the conditions. The winning proposition to install service is often built around one or two features of an established mechanical drive which the factory or store owner has never realized are grossly inefficient. It is pointed out that it is better to capture a power installation upon an underestimate of the profits of electric service than to promise the prospect of very large immediate savings which may be realized if the equipment is given a fair show but which may not be realized if it is subjected to abuse or improper service demands. The assertion is made that no one can study electric power applications long without being convinced that even a rehabilitated mechanical plant can scarcely hope in the long run to make as good a showing on total yearly cost as the same plant equipped with a properly designed motor drive.

COURT DECISION REFERENCES.

112—Franchises.

CITY OF MADISON V. SOUTHERN WISCONSIN RY. CO. Decision of the SUPREME COURT OF WISCONSIN, March 17, 1914. 146 Northwestern 492.

In this case the company attempted to recover the cost of paving that portion of a street between its railway tracks and one foot outside the rails, on the ground that, while its original franchise compelled it to bear the expense of such paving, its present franchise which was substituted for the original franchise in 1892, expressly omitted that provision. The court holds however that a provision of the new ordinance that the company should "keep the space between the rails of each track and for the space of one foot on the outside in proper repair so as not to interfere with travel" and "keep the same in proper order and cleanliness at its own cost and expense," places this obligation upon the company. The court's decision in *Milwaukee v. M. E. R. & L. Co.*, 151 Wis. 520, 139 N. W. 396, is cited and the general principle declared that "in the granting of such long franchises as the one in question, it must be presumed that a mutual intention existed that the grantee should not operate so as to obstruct the efforts of the authorities in their wisdom, to maintain the streets up to any reasonable standard required in order to keep abreast of the times and afford the public the use of ways, in harmony with progressive demands growing out of increase of population, increase of use, and improvements demonstrated by experience to be reasonably required to make such ways adaptable to changed conditions."

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May 13, 1914

No. 7

RATE RESEARCH



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RATE RESEARCH COMMITTEE
OF THE
NATIONAL ELECTRIC LIGHT ASSOCIATION
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Rate Research

Vol. 5

CHICAGO, MAY 13, 1914

No. 7

For statement of facts and opinions contained in papers abstracted herein, the Association does not hold itself responsible

COMMISSION DECISIONS

NEW HAMPSHIRE

144—Mergers.

Petitions of the GRAFTON ELECTRIC LIGHT AND POWER COMPANY concerning the Purchase of the Property of the Lebanon Electric Light and Power Company and the Mascoma Electric Light and Gas Company. Decision of the NEW HAMPSHIRE PUBLIC SERVICE COMMISSION, Refusing to Authorize the Transfer According to the Terms Proposed by the Company. February 3, 1914.

The petition for the right to purchase the properties was accompanied by a petition for authority to issue stocks and bonds.

The proposal to substitute for two companies having a combined capitalization of \$118,000, a single company with \$300,000 of capital, issued against the same property, obviously calls for the most careful scrutiny. . . .

A valuation of the properties was made to determine the reasonableness of the proposed purchase price and the basis for security issues.

311.2—Reproduction Cost New.

Counsel in this case, as in like cases, generally seem to us to lay altogether too much stress upon the cost of reproduction as the necessary measure of value.

The Supreme Court of the United States, in the Minnesota Rate case, said:

"The cost of reproduction method is of service in ascertaining the present value of the plant when it is reasonably applied and when the cost of reproducing the property may be ascertained with a proper degree of certainty. But it does not justify the acceptance of results which depend upon mere conjecture."

The cost of reproduction method certainly is of service in ascertaining the present value—in some cases of more service than in others. But it is not in itself the sole or the necessarily controlling factor in ascertaining that value. In the enumeration of the facts to be considered as laid down in *Smyth vs. Ames*, it is only one of several, all of which are to be given the weight due them, according to the facts of the particular case under consideration.

If by value we mean exchange value, the price for which an article will sell at a free sale, without anything in the nature of compulsion or extraordinary incentive on either side (*Westchester Street Railroad*

Company case, Public Service Commission of New York, Second District, decided April 24, 1912), it is obvious that cost of reproduction depreciated is not a final test of value. If I desire to sell my house, and both the prospective purchaser and I desire to agree upon a fair price, we by no means settle the ultimate question of value by securing the opinion of competent architects as to what it would cost to reproduce the house in its depreciated condition. Though that cost were ascertained to the complete satisfaction of both parties, I might yet think that for various reasons I ought to have more; and the purchaser would still in all probability express some interest in the question of what it actually cost me. And in the end I might be very fortunate to get the amount of my original investment, less what it would cost to make the house as good as new. . . .

315.1—Going Value.

A going concern value is also claimed, though no attempt is made to estimate its amount, and no evidence is adduced upon which specific findings could be based. The item is of course a proper one for consideration, but in view of the lack of definite evidence, we cannot attempt to estimate it separately, but, as to this and other items already enumerated, must follow the course suggested by the Supreme Court of Iowa in *Cedar Rapids Gas Light Co. v. City of Cedar Rapids*, 144 Iowa 434.

"The value of the plant is to be estimated in its entirety, rather than by the addition of estimates on its component parts, though the latter course will materially aid in determining the value."

And we repeat what we said in the *Berlin Electric Light Company* case:

"If especial weight is to be claimed for the going concern element on account of alleged failure of returns in earlier years, evidence should be introduced so that an intelligent finding upon that point may be made."

The petitioners' counsel seem to treat going concern value as synonymous with earning power or commercial value, and enter into elaborate calculations of the earnings of the two companies, compared with their proposed capitalization, and comparisons of their rates with rates of other companies in the State. The trouble with this reasoning is that it assumes that the existing rates are reasonable, because they compare favorably with rates elsewhere in New Hampshire. But this by no means proves that the rates are not too high. They may be too high everywhere. Or they may be reasonable elsewhere, and too high here because producing a return disproportionate to the value of the property. We cannot assume that the rates are reasonable until we know the value of the property. And if we use the return under existing rates to establish the value, we at once find ourselves traveling the old familiar vicious circle, proving value by rates and rates by value. Capacity for earning a comparatively large net income upon a small investment has an important

bearing in determining the return which the company should be allowed to earn. But that is another question. . . .

319.1—Water Power Rights.

The Commission says that the determination of the value of a water power is a task of the greatest difficulty.

Water power has value, if it produces energy at a sufficient saving over coal to offset the disadvantages attendant upon its variable production. But the entire saving over coal, calculated on the total annual production of power, and capitalized, certainly far exceeds the value of the power—what one would pay for it as a substitute for a steam plant. . . .

One feature of the “saving over coal” method of determining the value of a water power should not escape attention. We live in a region remote from the coal fields, the cost of transportation is heavy, and the price of coal is higher than in almost any other part of the country. On the other hand, ours is a mountainous State, with many streams having a large fall and furnishing an abundance of water power, much of which is still undeveloped. If we adopt the policy of valuing water powers in rate and capitalization cases by capitalizing their saving over coal, the people of the State are left subject to all the disadvantages attendant on remoteness from the coal mines, while enjoying no advantage from living in a region abundantly supplied with water powers. A “fair value” of a water power in New Hampshire cannot be a value which takes no account of our natural resources, and makes electricity produced by water as expensive to the public as if produced by coal. . . .

The evidence as to their value on a coal saving basis has been given due consideration, but cannot be accepted as a final test of value. . . .

COURT DECISIONS

MARYLAND

242.1—Testimony.

PUBLIC SERVICE COMMISSION OF MARYLAND v. NORTHERN CENTRAL RAILWAY COMPANY et al. NORTHERN CENTRAL RAILWAY COMPANY et al. v. PUBLIC SERVICE COMMISSION OF MARYLAND. Suit to Restrain the Enforcement of an Order of the Commission Establishing Switching Rates. Decision of the COURT OF APPEALS OF MARYLAND Restraining the Rates in Part. January 15, 1914. 90 Atlantic 105.

This is an appeal from an order of the Maryland Commission reducing the switching rates charged by the various railroads in Baltimore. The decision contains important rulings as to the weight to be given to expert testimony and comparative data in rate cases.

131—Protection from Confiscation.

We cannot adopt the view that common carriers may be required to perform services at rates less than the actual costs of such services,

for that would amount to confiscation and would ultimately defeat the ends they are designed to accomplish, namely, to subserve the public good and public convenience. . . .

242.1—Testimony.

The evidence adduced before the Commission for the purpose of showing what would be reasonable rates for the service prescribed consisted chiefly of the testimony of experts as to what would be reasonable charges for the several movements of freight mentioned, and evidence showing that in many other cities similar, and in some instances lower, charges for the same or like services are in force. While the latter does not show that the conditions at the points named are, in all respects, the same as the conditions existing in Baltimore city, it is nevertheless entitled to some weight in considering the unreasonableness of the rates in question. *Matter of Divisions of Joint Rates and Other Allowances to Terminal Railroads*, 10 *Interst. Com. Com'n. Rep.* 385; *Sinaiko Bros. v. Chicago, M. & St. P. Ry. Co.* 4 *Wis. R. R. Com'n. Rep.* 432; *Detroit Tariff Ass'n. v. L. S. & M. S.*, 21 *Interst. Com. Com'n. Rep.* 257. . . .

242.4—Experts.

They [the railroads] . . . offered evidence in the court below to show that the actual cost of the movements mentioned in the order of the Commission is in excess of the rates prescribed. This evidence was excluded by the court below, but we think it should have been admitted. It is difficult of course, to ascertain with absolute accuracy the cost of any particular service by railroad companies, which must acquire and maintain the necessary equipment and facilities for the accommodation of the business of its entire system. But the fact that such testimony may not be strictly accurate does not determine its admissibility. Nor does the fact that the estimate of the witness must be based upon data furnished by the records of the railroad company not under his immediate control and supervision, or the result of his own work or observation, render such evidence inadmissible.

Chicago, M., etc., Ry. v. Tompkins, 176 U. S. 167, 20 *Sup. Ct.* 336, 44 *L. Ed.* 417. This evidence consists of the opinions of experts, based upon calculations made by them of the costs of the service required and offered in evidence, and while its accuracy may not be susceptible of mathematical demonstration, we think it shows that the rates fixed by the Commission for connecting line and intermediate switching are unreasonable. . . .

MICHIGAN

600—Rate Differentials.

ALPENA ELECTRIC LIGHT CO. v. KLINE. Suit to Prevent Customer, Who Purchased Electricity for Power, from Using It for Lighting Purposes. Decision of the SUPREME COURT OF MICHIGAN, Enjoining Such Use. April 7, 1914. 146 *Northwestern* 652.

In this case a customer who used electrical power in his industrial establishment, ran a part of the current furnished to him at 440 volts, through a transformer which reduced the voltage to 110; and then used the current for lighting purposes within the plant. The company, being unable to determine what part of the current was used for power and what part for light, applied to the customer for leave to enter upon his premises and connect his lighting system with the company's city system of lighting. This was refused by the customer, whereupon the company brought suit for mandatory injunction to compel the customer to allow them to make the connection.

To permit one user to take the current at its power voltage and transform a portion of it to the lighting voltage, and use it for lighting, paying for the whole at the power rate, would be to permit a discrimination against all other users of the power for lighting, because the rate charged for the current when used for lighting is considerably higher than that charged when it is used for power. It should be noted that the reasonableness of the rates charged for both classes of service, according to the schedule filed with the Railroad Commission is not in issue in this proceeding. The right of a public service corporation to charge a higher rate for the same commodity when used for one purpose than when used for another purpose is perhaps not directly involved, though questioned by the defendant. We deem it unnecessary to pass upon the question in this proceeding as we are of opinion that the contention should in any event first be made before the Railroad Commission in a proper proceeding. Upon the question reference is had to the following authorities: *Boerth v. Detroit City Gas Co.*, 152 Mich. 654, 116 N. W. 628, 18 L. R. A. (N. S.) 1197; *In re Investigation of Milwaukee Lighting Rates*, 9 Wis. R. R. Com. R. 541; *Silkman v. Board of Water Com'rs*, 152 N. Y. 327, 46 N. E. 612, 37 L. R. A. 827. See, also *Principles and Methods of Municipal Trading*, by Prof. Douglas Knoop, p. 224. We are satisfied that the complainant is entitled to the relief prayed, and that, if defendant feels himself aggrieved by reason of excessive charges, his remedy is open through a proper application for relief to the Railroad Commission.

NEW YORK

319—Land.

PEOPLE ex. rel. WESTCHESTER ST. RY. CO. et al. v. PUBLIC SERVICE COMMISSION, SECOND DISTRICT. Suit to Set Aside an Order of the Public Service Commission Permitting the Westchester Street Railway Company to Issue its Common Capital Stock Only to the Amount of \$434,000. Decision of the COURT OF APPEALS OF NEW YORK Reversing the Commission's Decision. March 17, 1914. 104 North-eastern 952.

The decision of the Appellate Division in this case, reversing the commission's decision is given in 3 RATE RESEARCH 390.

141—Reorganization.

The Court here holds that the Purchasers of the Tarrytown, White Plains and Mamaroneck Railway Company, made no plan or agreement, at or previous to, the sale of the property and franchises of that company, in anticipation of the readjustment of the respective interests of the creditors, mortgagees, stockholders, etc., as provided by Stock Corporation Law (Consol. Laws, c. 59) § 10; and that therefore the formation of the Westchester Street Railway Company was not a "reorganization".

319—Land.

We are unable to hold, as is held in substance by the Appellate Division, that the Westchester Street Railroad Company is entitled, as a matter of law, to the approval by the public service commission of an issue of its stock to an amount at least equal to the bid made in its behalf for parts of the property and franchises of the Tarrytown, White Plains and Mamaroneck Railway Company.

The purchase price of property in the open market is generally entitled to great weight in determining the value of such property, but such purchase price is not conclusive evidence of value, and a determination of such amount does not prevent the consideration of other evidence bearing upon the value of the property purchased. The finding of the public service commission as to value having been disapproved and its order annulled and set aside, the proceeding should be remitted to it for its further action, in view of the findings of the Appellate Division, and either party to the proceeding should, if desired, be allowed to present further testimony to the commission relating to the question of value.

REFERENCES

RATES

612—Power.

ELECTRICITY FOR PUMPING, by J. M. BRYANT. Read before the Illinois Water Supply Association, March 10, 1914. *Engineering News*, 1½ pages, May 7, 1914, p. 1016.

This analyzes the cost of electricity for pumping under the headings (1) Cost of Pumping Units, (2) Cost of Operation, (3) Reliability, and (4) Cost of Power. It is stated that electric power for pumping should receive the lowest rate of nearly all classes of service furnished by a power plant. The proper rate to be charged in any community should be properly determined by a competent engineer or by a commission, and not left to the governing body of the community and the public utility without expert advice. The public utility should be encouraged to seek the pumping load and the city to co-operate in securing a price giving justice to all consumers. This co-operation should extend not only to the matter

of securing rates, but also in installing the equipment best for all concerned and of operating it at times when the company can best afford to supply the power. This same rule should also apply to combined municipally owned plants; each part of the service should bear its proper portion of the fixed variable charges.

614—Heating and Cooking.

ELECTRIC HEATING AND COOKING. Editorial, *Electrical Review*, May 9, 1914, p. 910.

This is a consideration of the desirability of electric cooking, and an analysis of its advantages over other methods.

612.2—Large Power.

ARRANGEMENT FOR CENTRAL STATION ENERGY. Editorial, *Electric Railway Journal*, May 2, 1914, p. 966.

This states some of the terms of the contract under which the Philadelphia Electric Company will supply the energy to operate the Pennsylvania's electric trains. It is said that the rate for this railroad service will be made up of a stand-by charge for kilowatts of demand and an energy charge per kilowatt-hour consumed. The rates will be increased proportionately if the power factor is less than 70 per cent. When the railroad company can guarantee a maximum demand of 15,000 kilowatts and 35 per cent load factor, the rate will be proportionately reduced.

614—Heating and Cooking.

MEETING OF THE "POINT FIVES," LONDON, APRIL 19, 1914: CHAIRMAN'S ADDRESS AND PROCEEDINGS.

Reference has been made to previous meetings of the "Point Fives" in 3 RATE RESEARCH 254, and 4 RATE RESEARCH 312. At this meeting, two new members were enrolled, Messrs. C. M. Shaw and C. F. Furness, their rates being as follows:

City of Worcester (England). 15% of the rateable value and $\frac{3}{4}$ d. per unit, subject to a discount of $\frac{1}{4}$ d. for prompt payment.

Blackpool Corporation (England). 12½% of the rateable value and $\frac{1}{2}$ d. per unit.

The chairman, Mr. Hame, in his address stated that the success of the electrical undertakings where low rates are offered for current used for domestic purposes, has sufficiently demonstrated the justification of these low charges, and that electricity for heating, cooking and other domestic purposes has proved to be satisfactory both to the supply undertakings and the consumers, in regard to economy and to its practical application. The main body of the address, and the discussion was devoted to a few of the important details connected with low price charges, and the apparatus, devices and appliances which help toward ultimate success in the application of electricity for domestic purposes.

612—Power.

ELECTRIC MOTORS IN ARGENTINA. *Daily Consular and Trade Reports*, $\frac{3}{4}$ page, May 6, 1914, p. 701.

This states that electric motors are used in Rosario to a considerable extent, those for industrial purposes being chiefly in small plants and workshops. The Sociedad de Electricidad (light and power plant) states that there are 1,200 electric motors in use at Rosario ranging up to 45 horsepower. The greatest demand is for small motors of 5 to 7 horsepower. Conditions with respect to voltage, current prices, etc., are as follows: Main part of the city, continuous current, 449 volts for motors over 5 horsepower and 220 volts for lighter motors; outer districts, three-phase alternating current, 200 volts for motors over 5 horsepower and 110 volts for lighter motors. Rates for motors are as follows: 9.7 cents per

kilowatt-hour for first 30 kilowatt-hours consumed per month for each horsepower installed; 5.8 cents per kilowatt-hour for remainder up to 1,000 kilowatts; and 4.3 cents per kilowatt-hour for consumption in excess of 1,000 kilowatts per month. The company grants special rates to large consumers and endeavors through advertising to increase the use of electric motors. It neither owns nor rents motors except those used in its own plant.

510—Forms of Rates.

SELLING ELECTRIC SERVICE, by FRED O. DOLSON. *Journal of Electricity, Power and Gas*, 1½ pages, May 2, 1914, p. 382.

This suggests a rate consisting of a service charge, plus a charge per kilowatt-hour which shall be exactly inversely proportional to the load factor. To show the advantages of this form of rate, an example is taken consisting of a service charge of \$1 per horsepower per month (based on maximum demand) plus a meter rate of two cents per kilowatt-hour, with a discount, e. g. (50 per cent times the monthly load factor). This is compared to various irrigation rates, namely that fixed by the California Commission for the Northern California Power Company; that charged by the Great Western Power Company; and that charged by the Pacific Power & Light Company of Portland. A chart is given showing graphically a comparison of these rates.

614—Heating and Cooking.

THE ELECTRIC COOKING OPPORTUNITY, by S. J. HALLS. *Journal of Electricity, Power and Gas*, ½ page, May 2, 1914, p. 383.

This gives further discussion of the electric cooking business of the British Columbia Electric Railway Company, to which reference was made in 4 RATE RESEARCH 214. The average connected cooking consumer is 3.75 kilowatts, with an average maximum demand of 2 kilowatts, and the kilowatt-hour consumption works out at about 90 kilowatt-hours monthly, which, at the present rate of 5 cents per kilowatt-hour, amounts to an average bill of \$4.50. In taking chart readings it is found that about 79 per cent of the energy used is "off-peak" and 21 per cent comes on the daily peak, the peak period being roughly from 4 p. m. to 8 p. m. in the winter months and from 7 p. m. to 11 p. m. during the summer months. The opinion is expressed that it is to the middle classes, and particularly to the housewife who does her own work, that central stations must look, at any rate for the present, for an increase in cooking business. There is no doubt but that many people are these days studying economy.

614—Heating and Cooking.

THE FUTURE OF ELECTRIC HEATING AND COOKING IN MARINE SERVICE, by H. J. MAUGER. *Proceedings of the A. I. E. E.*, 10 pages, May, 1914, p. 693.

Indications of the future point to electric motor driven propulsion, and abandonment of coal-burning boilers. Electric cooking and heating is in line with this development and the source of heat for cooking and heating will be confined to the boiler room. The future of electric cooking apparatus is assured by the progress already made in the U. S. Navy in adopting electric equipment. A detailed report is given of a trial trip of U. S. Texas, which depends almost entirely upon electricity for cooking. Consumption of 1.25 kilowatt-hours per person per meal is indicated. Load factor was 50 per cent. Electric ranges and bake ovens effect considerable saving in weight and space and release cooks from being "firemen" to devote their time and effort to good cooking. Electric cooking finds greatest advantages in high temperature cooking. Electric heating on ship-board does away with the disadvantages of steam piping and gives individual and local regulation and provides, where desired, glowing heat without fire. Other accessories are the electric flatiron, the soldering iron and therapeutic devices.

612—Power.

ELECTRIC POWER, by DAVID B. RUSHMORE and ERIC A. LOF. *Proceedings of the A. I. E. E.*, 16 pages, May, 1914, p. 803.

The authors briefly trace the evolution of electric power up to the present time, and note various fields of application of electric power which have become specialized branches of electrical engineering. The tendency of public utilities towards consolidation, and the advantages to be derived thereby, are discussed, also the interconnection of hydroelectric plants, and the grouping of systems under a holding company. The growth of the electric power industry is illustrated by reference to the recent U. S. census report. The present practice tends to the use of very large generating units, and transmission lines are being constantly increased in length and operated at higher voltages. Applications of electric power to various industries are briefly referred to and their advantages in various fields are specified.

INVESTMENT AND RETURN**300—Investment and Return.**

VALUATION AND RATE MAKING PRINCIPLES AND PRECEDENTS. *Electric Railway Journal*, 4 pages, May 2, 1914, p. 989.

This gives an abstract of the company's brief in the Springfield (Mo.) Gas & Electric Company case (See 5 RATE RESEARCH 13.) It is said that the case is of decided interest because in it are involved valuation and rate-making issues that are highly important in the electric light and electric railway fields. The decision in the case will probably take its place as a precedent in these matters for all classes of public utilities in the State. The brief is characterized as an exhaustive resume of appraisals and previous decisions involved in the subject of valuation and rate-making. The four primary questions considered in the brief are abstracted, i. e., (1) What value of the property of the company should be used as a basis of reasonable return? (2) What shall be the allowance for depreciation reserve? (3) What is the proper rate of return? (4) What are the proper operating charges?

300—Investment and Return.

A FAR REACHING DECISION. Editorial, *Stone & Webster*, May, 1914, p. 333.

This states briefly the rulings of the New York Court of Appeals in the Kings County Lighting Case, on going value, paving over mains, and land. It is said that this is one of the most important decisions under the public utility law of New York. It is believed that it will have a far reaching effect in standardizing the views of the nation on these three important questions.

PUBLIC SERVICE REGULATION**132—Protection from Competition.**

MONOPOLY IN UTILITY SERVICE. Editorial, *Electrical World*, May 2, 1914, p. 965.

This states that the Public Service Commission of Pennsylvania has rendered decisions upholding as desirable the principle of monopoly in public utility service. In so doing it takes the same position that most of the other commissions hold on

this question. That is to say, it decides that it is unwise to permit two companies to do in competition what one existing company serving a territory is able to do. The grounds on which such a policy is defensible are reasonable and economic. The history of public utility companies in various parts of the country proves the case. Generally a competing plant is absorbed by the existing company whose rate it demoralized and whose business it tried to get. The public has been so short-sighted in the past as to see only the lower rates which the competitor promised and to fail to see that a consolidation was inevitable after an uneconomic rate war had demoralized the business. After such a consolidation there are two plants and two capital accounts upon which the public is expected to pay a return. The theory of regulation by the public is that the monopoly furnishing the service shall be protected from destructive competition. The companies, on their part, are not without obligations when they accept this theory. They owe it to the public to give as good service while enjoying protection as a monopoly as they would give if they were under the spur of competition.

268—Public Service Laws.

THE ILLINOIS PUBLIC UTILITIES LAW, by WILLIAM J. NORTON. *The Voter*, 2½ pages, May, 1914, p. 42.

This considers various questions connected with the Illinois law. It is pointed out that there seems to have been a tendency to follow the California law in drafting the law; and that the law enacted in Illinois provides for practically the same regulation of public utilities as exist in other states, such as New York, New Jersey, Wisconsin and Indiana. The various powers and duties delegated to the commission are set forth in a great amount of detail, which may prove a needless burden to the commission. The restrictions imposed upon the commission make it a law hard to administer in its application to the varying conditions and circumstances coming under its jurisdiction. Compared with similar laws of other states, it is also evident that the Illinois law is most restrictive upon the companies and that the line of arbitration between the public and the corporations is not fairly drawn. In many respects the law distinctly favors the public as against the corporations. The statement is that the Illinois law is grossly defective in that it does not afford protection against competition by a municipal plant. In conclusion, it is said that the present utility law provides on the whole a satisfactory beginning, and the present administration of the law promises that there will be careful and considerate action by an arbitration body ready to profit by the experience of similar bodies in other states and willing to proceed slowly until the situation is thoroughly understood and a course determined fair alike to both the companies and the public.

220—General Powers of Commissions.

JURISDICTIONAL LIMITATIONS UPON COMMISSION ACTION, by BRUCE WYMAN. Pamphlet, 24 pages, Reprinted from Volume 27, *Harvard Law Review*, Cambridge, Massachusetts.

This is an examination of the recent decisions defining the powers conferred upon the Interstate Commerce Commission. In conclusion, it is averred that these decisions mean that as a people we will not be content to have our rights determined by administrative fiat; we demand reasoned judgment based upon ascertained principles generally understood. If the Commission is to be held to its function of administering the law, we must have some basis for determining the meaning of the word reasonable used in the Act. The Commission can only set aside a rate if it is unreasonable; in its place it can only fix a rate which is reasonable. But how is it to be determined what rates are unreasonable and what change would make them reasonable, unless we have definite principles universally recognized? The Interstate Commerce Commission itself has made noteworthy progress in the past few years in establishing by its decisions the bases upon which the reasonableness of rates depend as a matter of law. The Supreme Court has also of late years been giving the stamp of its approval to rules for the determination of the reasonableness of rates which seem at last to be practi-

cable. Vague though a phrase in a statute may apparently be, yet it may well have a definite meaning in the law; and by the prevailing rule, when a given phrase has an accepted significance at common law, it should be taken in that sense. We must have some objective standard to go upon, or we have no security from subjective differences. What is reasonable according to principles of law governing the matter is what we must insist upon in order to confine our commissions to administration. If we have nothing to rely upon except what seems upon the whole to the body in power desirable or impolitic, we can hope for nothing better than benevolent despotism subject to all the corresponding risks of arbitrary power.

200—Public Service Regulation

CONDUCT OF PUBLIC UTILITIES UNDER COMMISSION SUPERVISION, by F. W. STEARN. Read before the Iowa Section, N. E. L. A., Cedar Rapids, Iowa, 1914.

This traces the development of the regulation of public utilities from the first attempts to regulate by legislation to the present. It is pointed out that this great development of the idea of regulation of public utilities through state commissions has not been accomplished without opposition. This mainly from two sources. First the utility corporations themselves, and secondly, the large municipalities. The opposition of the public utility corporations to the establishing of state regulation has been based upon what is believed to be a mistaken idea of the probable effects of such regulation, and that of the municipalities upon jealousy and disinclination to surrender any of the prerogatives of so-called "home-rule." A few of the most salient advantages of state control as opposed to municipal control, are pointed out. Reference is made to the procedure of commissions in handling cases; to the quasi-judicial character of commission action; to the expert quality of the work. It is said that when compared with the way that such matters are usually considered by municipal councils, the contrast is as great as the difference between day and night. This is particularly true in rate regulation.

MUNICIPALITIES

810—Municipal or Local Regulation of Utilities.

CLEVELAND COMPANY APPEALS TO STATE COMMISSION IN 3-CENT RATE CASE. *Electrical World*, $\frac{1}{2}$ page, May 2, 1914, p. 973.

This comments on the fact that an appeal has been made to the Public Utilities Commission of Ohio by the Cleveland Electric Illuminating Company in regard to the ordinance passed by the City Council of Cleveland on March 16, 1914, fixing a maximum rate for illuminating electricity of 3 cents per kilowatt-hour. The statement issued by Mr. Samuel Scovil, President, explaining the company's stand in the matter, is quoted.

830—Public Ownership.

MUNICIPAL PLANT, PLAIN CITY, OHIO. *O. E. L. A. Monthly*, 1 page, May, 1914, p. 158.

This states that the municipal light and water plant at Plain City, Ohio, is experiencing the usual trouble of municipal plants. Some sixteen years ago the village constructed its light and water plant. Like most municipal plants, while it had the taxpayers pay the interest by taxation and used the entire income of the plant for its operating expense, setting back nothing for depreciation, it went serenely on its way under the mistaken idea that it was making money. At the end of 1913 it found its machinery well toward the end of its depreciation, with no part of the original bonds paid and with a deficit of about \$1,800 on the last

six months operation. The Board of Public Affairs of the village, composed of good men in their respective vocations, concluded that there was something wrong and called in an electrical engineer who made a very careful analysis of their property and found that their water was costing them 11.27 cents per thousand gallons to pump and deliver, and their electricity 9.5 cents per kilowatt-hour to generate, and they were selling their water at 10 cents per thousand gallons and their electricity at 8 cents per kilowatt-hour, and laying by nothing for depreciation; and the village paying the interest on the bonds and would eventually have to pay the bonds.

330—Municipal Ownership.

MUNICIPAL OWNERSHIP FOR THE CAPITAL CITY. Editorial, *Electric Railway Journal*, May 2, 1914, p. 957.

This discusses the advocacy by the Public Service Commission of the District of Columbia of the passage of a bill providing for the "acquisition, ownership and operation of all the Washington street railroads." Various objections both as to method and principle are cited. The Commission's report is quoted to the effect that "if this public service is performed by public authorities they can have no other motive than to do those things that the traveling public demands. They have but to maintain a proper relation between efficient service and the cost thereof." It is pointed out, that the idea that the commissioners of the District of Columbia, changed as they are every four years and sometimes after shorter terms, could take over the transportation problem of the District of Columbia and handle it more efficiently than the existing companies are handling it at the present time, is of course an assumption entirely unjustified by general experience or the facts of this particular case. The commissioners have found the regulation of electric railways "perplexing" and "complex," but this does not seem to have suggested to them that ownership and operation would be at least as perplexing and complex as mere regulation. Moreover there is nothing in the management of government or municipal enterprises which shows evidence of notable efficiency or absence of politics or gives ground for belief that any different plan would be followed if the operation of the public utilities was under the same direction.

330—Public Ownership.

HEARING BEFORE THE SUBCOMMITTEE ON STREET RAILWAYS OF THE COMMITTEE ON THE DISTRICT OF COLUMBIA. HOUSE OF REPRESENTATIVES, SIXTY-THIRD CONGRESS, SECOND SESSION ON H. R. 7896. Pamphlet, 141 pages.

This gives the testimony given before this Committee in its consideration of the question of municipal ownership of street railways in the District of Columbia.

330—Municipal Ownership.

THE PUBLIC UTILITY BUSINESS, by W. H. McGRATH. *Puget Sound Electric Journal*, 2 $\frac{3}{4}$ pages, May, 1914, p. 12; and *Stone & Webster*, 3 pages, May, 1914, p. 357.

This traces the change in the attitude of the public from the early days of encouragement to the present days of restriction and regulation. The general socialistic character of the present tendencies and the inherent dangers of these tendencies, are pointed out. It is shown that, while a well-managed municipal undertaking keeps up the appearance of success for a longer period than the ill-managed municipal undertaking, the final answer is the same and the end usually comes when the tax-payer finds his burden is becoming yearly greater and greater, and at last calls a halt. He concludes that if the interest charges on this program are so terrific we had better not borrow any more money until we can see some way of paying back what we have already borrowed. He sees what the condition of municipal finances have now become; in addition to making it impossible for a private corporation to raise money because of conditions which surround the

business, and in addition to making the public utility company which is probably the largest tax-payer in the community carry a large share of the burden of a competitive enterprise, the tax rate has now risen to a point which discourages all industries of any kind from coming to the city, and stops its growth and prosperity. Finally, by approaching or reaching its debt limit, the city cannot longer find a market for its own municipal bonds and the people suffer because neither the company nor the city, nor anybody else can provide the extensions and service which the people require. How far this gloomy outlook may be realized only depends on the extent to which this socialistic municipal program is carried out, but in some of our Pacific Coast cities where we already have municipal light plants, municipal railways, municipal ice plants, and are seriously talking about municipal golf links, and municipal pool rooms, we are certainly headed in this direction.

GENERAL

930—Public Relations.

LOWLANDERS AND HIGHLANDERS—THE PROBLEM OF CO-OPERATIVE PUBLICITY, by HENRY C. HAZZARD. *Electric Railway Journal*, 3 pages, May 2, 1914, p. 967.

This discusses the need of a direct and united presentation of the case of the public utility companies. There is a comparison of the attitude of the public in the past and in the present, and an analysis of the general causes of the present dissatisfaction and unrest. The different views of public utility companies as to the seriousness of the question, are compared to the different attitude taken by lowlanders and highlanders, when danger from flood is threatened. It is said that in co-operation lies the fundamental difficulty to successful publicity—that of bringing together, and then of holding together, the lowlanders and the highlanders in a comprehensive publicity campaign. For, publicity ways and means that may be acceptable to the one as none too adequate, are quite certain to be rejected by the other as extreme. Assuming that the necessity of united action becomes generally recognized and that a sectional or national organization undertakes to put into practice the theory of co-operation in publicity, there at once is presented the unsolved and complex problem of how to proceed. It is stated that old methods should be discarded for new, that public utilities must adopt a perfectly frank attitude toward the public and endeavor to inform the public openly and frankly; and that a campaign with such an end in view must be straight to the point, artless, candid and unreserved. It should be accepted as a matter of fact that the cause is worthy of being expounded and that the best interests of the public demands plain speaking even more urgently than the best interests of the public utilities.

910—Promotion and Growth of the Business.

MERZ AND McLELLAN ON LONDON ELECTRICITY SUPPLY. Article and Editorial, *Electrical World*, 1 page, May 2, 1914, p. 971 and 967; Editorial, *Electric Railway Journal*, May 2, 1914, p. 955.

This comments on the report rendered on April 16 by Messrs. Merz and McLellan to the London County Council on "London Electricity Supply." According to their investigations, the replacement of all of the existing stations in a territory of 100 square miles, by eight or ten plants farther down the Thames River would save 18 per cent, or approximately \$850,000, a year in operating expenses. This saving means that after allowing all capital and sinking fund charges on the new equipment the entire cost of the old plants would be written off by 1931. The editorials state that it is very encouraging to note all over the world the increasing appreciation of the economies incident to the supply of electricity in bulk. The time has gone by when isolated small stations can make a good economic showing in the face of the steady public pressure for lower prices. The great stations of this country have for years past been working at the economies of wholesale

supply, and the excellent results obtained have served as an admirable example elsewhere. Now London seems to be awaking to the situation, and the present London electric supply bill may fairly be said to be chargeable in no small degree to the good example set on this side of the water. It is pointed out that a striking feature of the report is the reference to the fact that several railways (presumably the London & South Western and the London & Northwestern Railways) are building their own stations for electrified suburban lines because of the present inadequate energy supply. Certainly the load factor of such lines is not one which should encourage the building of separate plants if a whole battery of centralized interconnected plants is available. While the consulting engineers suggest several ways to carry out the scheme of centralization, they appear to favor partial or complete municipal ownership with private operation on a profit-sharing basis.

COURT DECISION REFERENCES.

129.3—Refusal of Service.

GLENFIELD BOROUGH et al. v. MANUFACTURERS' LIGHT & HEAT COMPANY. Decision of the SUPREME COURT OF PENNSYLVANIA. January 5, 1914. 90 Atlantic 158.

In this case the gas company was at one time enjoined from discontinuing free gas to churches, as was required by its franchise. This franchise has however been superseded by a second, which omits the provision regarding such free service. Therefore the court dissolves the injunction.

112.5—Ordinance Rates.

BIRMINGHAM WATERWORKS COMPANY v. CITY OF BIRMINGHAM. Decision of the DISTRICT COURT, N. D. ALABAMA, S. D. January 9, 1913. 211 Federal 497.

In this case the franchise, granted by the city in 1888, named the rates to be charged by the company during life of the franchise, which was thirty years. This decision holds that the city must abide by the contract. The rate provisions of the franchise are interpreted as fixing absolute rather than maximum rates; and it is held that the city has no power to regulate further, during the life of the franchise.

115—Use of Public Highways.

NORMAN MILLING & GRAIN COMPANY v. BETHUREM. Decision of the SUPREME COURT OF OKLAHOMA. February 3, 1914. On Rehearing, April 4, 1914. 139 Pacific 830.

This decision is concerned with the question of the relative rights in the streets, of owners of trees and the companies stringing wires on the streets. The Court holds that, in such a case, mutual and reasonable accommodation is due from each to the other. In this case the owners of the trees are awarded damages.

782.5—Lamp Efficiency.

MANUFACTURERS' NATURAL GAS CO. v. BIRMINGHAM & BROWNSVILLE MACADAMIZED TURNPIKE ROAD CO. Decision of the SUPREME COURT OF PENNSYLVANIA. January 5, 1914. 90 Atlantic 134.

In this case the gas company which was obligated by charter to furnish free street gas, applied to the Courts to have Welsbach burners installed and secured a decree to that effect. This decision holds that the gas company should pay for the installation and upkeep of the Welsbach burners since, while such burners save gas, they are more expensive to maintain than those approved by the former decree.

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May 20, 1914

No. 8

RATE RESEARCH



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Rate Research

Vol. 5

CHICAGO, MAY 20, 1914

No. 8

For statement of facts and opinions contained in papers abstracted herein, the Association does not hold itself responsible

COMMISSION DECISIONS

ILLINOIS

72—Rate Schedules.

Application of THE WESTERN UNITED GAS AND ELECTRIC COMPANY for Authority to Change Rates. Decision of the ILLINOIS PUBLIC UTILITIES COMMISSION, Granting the Right to Put in Effect the Schedule of Rates Submitted by the Company, May 6, 1914.

This is the first case in which a complete rate schedule is copied into the decision and formally approved by the Illinois Commission. The following are the rates approved by the Commission revised according to the Rate Research Committee form:

NOTE.—In preparing this schedule for publication in RATE RESEARCH in the usual form it has been necessary to change to a considerable extent the actual wording of the schedule as approved by the Commission, and there was some difficulty in determining the exact meaning of the schedule. The Rate Research Committee has repeatedly called attention to the necessity of very clear statements in rate schedules and also to the danger of using abbreviations in rate schedules, and we are surprised to find in a schedule approved by a Commission, the abbreviation, K. W., used, when kilowatt-hours are meant.

Attention is also called to the peculiar energy charge in the above maximum demand and power rates. It seems unfortunate that such a complicated rate schedule should be proposed at this time, as it would have been much easier to express the same rate in a standard form, and in our opinion, nothing is gained by such complications.

LIGHTING RATES.

Rate.

12 cents per kilowatt-hour.

Prompt Payment Discount.

2 cents per kilowatt-hour when bills are paid before the 15th day of the month following that in which service is rendered.

Quantity Discount.

2 cents per kilowatt-hour if bills at the net rate are \$10.00 per month, or over.

Minimum Charge.

50 cents per month per meter.

City of Wheaton, only. \$1.00 per month per meter.

EDITORIAL NOTE.—All indented matter is direct quotation.

MAXIMUM DEMAND LIGHTING RATE.

Optional for business houses for periods of not less than one year.

Rate.**Demand Charge.**

20 cents per 100 watts, or fraction thereof, of maximum demand.

Energy Charge.

4 cents per kilowatt-hour consumed per month.

$\frac{1}{2}$ cent per kilowatt-hour discount when the energy charge is twice the demand charge, or over, in any month.

1 cent per kilowatt-hour discount when the energy charge is four times the demand charge, or over, in any month.

$1\frac{1}{2}$ cents per kilowatt-hour discount when the energy charge is six times the demand charge or over in any month.

Determination of Demand.

The maximum demand shall be determined from the connected load of the consumer, and may be determined and revised from time to time as the company may see fit or the consumer may request, such intervals of revision not to be less than three months.

POWER RATES.**Rate.****Demand Charge.**

\$1.50 per kilowatt, or fraction thereof, of the maximum demand.

Energy Charge.

4 cents per kilowatt-hour for electricity used equivalent to or less than the first 60 hours' use of maximum demand.

3 cents per kilowatt-hour for electricity used equivalent to the next 30 hours' use of maximum demand.

2 cents per kilowatt-hour for electricity used equivalent to the next 30 hours' use of maximum demand.

$1\frac{1}{2}$ cents per kilowatt-hour for all electricity used in excess of the above.

Determination of Demand.

The maximum demand is to be determined from time to time as the company may see fit or the consumer may request, by a demand meter or suitable instrument. The reading of which meter or instrument shall govern until such time as a new reading may be taken.

Quantity Discount.

10 per cent on installations of from 50 to, and including, 99 horse power demand.

10 per cent additional on installations exceeding 99 horsepower demand.

Prompt Payment Discount.

10 per cent when bills are paid on or before the 15th day of the month next succeeding that in which service is rendered.

Minimum Charge.

\$3.00 per month per consumer.

OFF-PEAK BUSINESS.

Available for any customer agreeing to use no current from October to March, inclusive, between the hours of 3:30 P. M. and 10:00 P. M.

Rate.

Same rate per kilowatt-hour as under the regular power schedule subject to the same discounts. No demand charge.

Term of Contract.

One year or more.

SPECIAL OFF-PEAK RATE.

Available for lighting and power customers where the company shall have full control over the hours' use, and may regulate, curtail or suspend service at any time.

Rate.

3 cents per kilowatt-hour.

RATES FOR THE CITY OF GLENELLYN

The following rates, fixed by ordinance, are charged for all service in Glenellyn.

Rate.

15 cents per kilowatt-hour.

Prompt Payment Discount.

3 cents per kilowatt-hour when bills are paid or before the month next succeeding the month in which service was rendered.

Minimum Charge.

\$1.00 per month.

COURT DECISIONS**UNITED STATES SUPREME COURT****112—Franchises.**

RUSSEL V. SEBASTIAN. In Error to the Supreme Court of California to Review a Decree Refusing Relief by Habeas Corpus to a Person Arrested for Excavating in a City Street in Violation of a Municipal Ordinance. Decision of the UNITED STATES SUPREME COURT Reversing the Decision of the Lower Court and Remanding It for Further Proceedings. April 6, 1914. 34 Sup. Ct. 517.

The Constitution of California of 1879 as amended in 1885 (Art. XI), Section 19, provided that in any city where there are no public works owned and controlled by the municipality for supplying the same with water or artificial light "any individual, or any company duly incorporated for such purpose" under the State law, should under general municipal regulations "have the privilege of using the public streets and thoroughfares thereof and of laying down pipes and conduits therein and connections therewith" for supplying the City and its inhabitants with gas, light or fresh water, subject to the rights of the municipal government to regulate the charges thereof.

On October 10th, 1911, this Section of the Constitution was amended so as to provide, among other things, "persons or corporations may establish and operate works for supplying inhabitants with such services (light, water, power, heat, transportation and telephone service), upon such conditions and under such regulations as the municipality may prescribe under its organic law, on condition that the municipal government shall have the right to regulate the charges thereof."

By Ordinance, approved October 26th, 1911, the City of Los Angeles provided that no one should exercise any franchise or privilege to lay or maintain pipes or conduits in the streets for conveying gas, water, etc., without having obtained a grant from this City unless such person or corporation might be "entitled to do so by direct and unlimited authority of the Constitution of the State of California or of the Constitution or laws of the United States."

Another Ordinance, approved February 21st, 1912, declared that it should be unlawful to make any excavation in a street for any purpose, without written permission from the Board of Public Works, and that before issuing the permit the Board should require the applicant to show legal authority to use the streets for the purpose specified.

The Economic Gas Company, which operated in Los Angeles under the Constitution of 1879 as amended in 1885, in October, 1911, applied to the Board of Public Works for permission to excavate in a certain street. The Board informed the Company that it would not be permitted to open the street or to lay its pipes therein unless it first sought and obtained a franchise by purchase in accordance with the Ordinance of October 26th, 1911. Thereupon the Company notified the Board that it would extend its mains at the time and place stated, and requested the Board to direct and superintend the work. It was proceeding to do so when plaintiff in error was arrested. The court holds that the Company, by the establishment of its plant, accepted the State's offer in the Constitution of 1879, as amended in 1885, that the resulting grant constituted a contract, and vested in the Company a property right protected by the Federal Constitution against impairment; and that the Company's contract rights included the privilege of extending its mains into streets not previously used, subject to the constitutional provisions that the city should superintend the execution of the work, regulations for indemnity with respect to damage, and the right of the municipality to regulate rates.

The court quotes the case of *Re Johnston*, 137 Cal. 115, 69 Pac. 973, interpreting § 19 of article 11 of the constitution.

When the voice of the State declares that it is bound if its offer is accepted, and the question simply is with respect to the scope of the obligation, we should be slow to conclude that only a revocable license was intended. Moreover, the provision plainly contemplated the establishment of a plant devoted to the described public service and an assumption of the duty to perform that service. That the grant, resulting from an acceptance of the State's offer, constituted a contract and vested in the accepting individual or corporation a

property right, protected by the Federal Constitution, is not open to dispute in view of the repeated decisions of this court.

"New Orleans Gas Light Co. v. Louisiana Light & H. P. & Mfg. Co., 115 U. S. 650, 660, 29 L. ed. 516, 520, 6 Sup. Ct. Rep. 252; New Orleans Waterworks Co. v. Rivers, 115 U. S. 674, 680, 681, 29 L. ed. 525, 527, 528, 6 Sup. Ct. Rep. 273; Walla Walla v. Walla Walla Water Co. 172 U. S. 1, 9, 43, L. ed. 341, 345, 19 Sup. Ct. Rep. 77; Louisville v. Cumberland Teleph. & Teleg. Co. 224 U. S. 649, 663, 664, 56 L. ed. 934, 940, 941, 32 Sup. Ct. Rep. 572; Grand Trunk Western R. Co. v. South Bend, 227 U. S. 544, 552, 57 L. ed. 663, 639, 44 L. R. A. (N. S.) 405, 33 Sup. Ct. Rep. 303; Owensboro v. Cumberland Teleph. & Teleg. Co. 230 U. S. 58, 65, 57 L. ed. 1389, 1393, 33 Sup. Ct. Rep. 988; Boise Artesian Hot & Cold Water Co. v. Boise City, 230 U. S. 84, 90, 91, 57 L. ed. 1400, 1406, 1407, 33 Sup. Ct. Rep. 997; Dill. Mun. Corp. 5th ed. § 1242."

The controversy in the present case relates to the extent to which the grant had become effective through acceptance. It is not contended that the change in the Constitution could disturb the company's right in the streets used previous to the amendment; but it is insisted that such actual user measured the range of the acceptance of the grant, and hence defined the limits of its operation.

In support of this view, the established and salutary rule is invoked that public grants are to be construed strictly in favor of the public; that ambiguities are to be resolved against the grantee.

Charles River Bridge v. Warren Bridge, 11 Pet. 420, 546, 549, 9 L. ed. 773, 823, 824; Slidell v. Grandjean, 111 U. S. 412, 437, 28 L. ed. 321, 329, 4 Sup. Ct. Rep. 475; Detroit Citizen's Street R. Co. v. Detroit R. Co. 171 U. S. 48, 54, 43 L. ed. 67, 71, 18 Sup. Ct. Rep. 732; Knoxville Water Co. v. Knoxville, 200 U. S. 34, 50 L. ed. 359, 26 Sup. Ct. Rep. 224; Blair v. Chicago, 201 U. S. 400, 471, 50 L. ed. 801, 830, 26 Sup. Ct. Rep. 427.

It has often been stated, as one of the reasons for the rule, that statutes and ordinances embodying such grants are usually drawn by interested parties, and that it serves to frustrate efforts through the skillful use of words to accomplish purposes which are not apparent upon the face of the enactment.

"Dubuque & P. R. Co. v. Litchfield, 23 How. 66, 88, 16 L. ed. 500, 509; Slidell v. Grandjean, 111 U. S. 412, 437, 28 L. ed. 321, 329, 4 Sup. Ct. Rep. 475; Blair v. Chicago, 201 U. S. 400, 471, 50 L. ed. 801, 830, 26 Sup. Ct. Rep. 427."

But it must also be recognized that this principle of construction does not deny to public offers a fair and reasonable interpretation, or justify the withholding of that which it satisfactorily appears the grant was intended to convey.

Winona & St. P. R. Co. v. Barney, 113 U. S. 618, 625, 28 L. ed. 1109, 1111, 5 Sup. Ct. Rep. 606; United States v. Denver & R. G. R. Co., 150 U. S. 1, 14, 37 L. ed. 975, 979, 14 Sup. Ct. Rep. 11; Minneapolis v. Minneapolis Street R. Co., 215 U. S. 417, 427, 54 L. ed. 259, 267, 30 Sup. Ct. Rep. 118.

Here, the provision was presented by a constitutional convention for adoption by the people as the deliberate expression of the policy of the State in order to secure the benefits of competition in public service and it will not be questioned that it must receive, as the

State court said in *People v. Stephens*, 62 Cal. p. 233, "a practical, common-sense construction."

There is no ambiguity as to the scope of the offer. It was not simply of a privilege to maintain pipes actually laid, but to lay pipes so far as they might be required in order to effect an adequate distribution. The privilege was defined as that "of using the streets and thoroughfares thereof, and of laying down pipes and conduits therein, and connections therewith, so far as may be necessary for introducing into and supplying such city and its inhabitants either with gaslight, or other illuminating light, or with fresh water for domestic and all other purposes upon the condition that the municipal government shall have the right to regulate the charges thereof."

The breadth of the offer was commensurate with the requirements of the undertaking which was invited. The service to which the provision referred was a community service. It was the supply of a municipality—which had no municipal works—with water or light. This would involve, in the case of waterworks, the securing of sources of supply, the provision of conduits for conveying the water to the municipality, and the permanent investment in the construction of reservoirs with suitable storage capacity; and, in the case of gasworks, the establishment of a manufacturing plant on a scale large enough to meet the demands that could reasonably be anticipated. But waterworks and gasworks constructed to furnish a municipality with water or light would of course, be useless without distributing systems; and the right of laying in the streets the mains needed to carry the water or gas to the inhabitants of the community was absolutely essential to the undertaking as a practical enterprise. . . .

The individual or corporation undertaking to supply the city with water or light was put in the same position as though such individual or corporation had received a special grant of the described street rights in the city which was to be served. Such a grant would not be one of several distinct and separate franchises. When accepted and acted upon it would become binding—not foot by foot, as pipes were laid, but as an entirety, in accordance with its purpose and express language. *Grand Trunk Western R. Co. v. South Bend*, 227 U. S. 544, 555, 556, 57 L. ed. 633, 640, 641, 44 L. R. A. (N. S.) 405, 33 Sup. Ct. Rep. 303.

It is urged that, in the absence of any provision for formal or written acceptance, the only way the offer could be accepted was by use of the streets, and that for this reason the rights of the company could not extend beyond the length of its pipes in place. But this is to say that the offer as made could not be accepted at all; that the right to lay pipes could not in any event be acquired. It is to assume, despite the explicit statement of the constitutional provision, that the investment in extensive plants—in the construction of reservoirs, and in the building of manufacturing works—was invited without any assurance that the laying of the distributing system could be completed, or that

it could even be extended far enough to afford any chance of profit. It would be to deny the right offered, although essential to the efficiency of the enterprise, and in its place to give a restricted and inadequate right, which was unexpressed.

In view of the nature of the undertaking in contemplation, and of the terms of the offer, we find no ground for the conclusion that each act of laying pipe was to constitute an acceptance *pro tanto*. We think that the offer was intended to be accepted in its entirety as made, and that acceptance lay in conduct committing the person accepting to the described service. The offer was made to the individual or corporation undertaking to serve the municipality, and when that service was entered upon and the individual or corporation had changed its position beyond recall, we cannot doubt that the offer was accepted.

City R. Co. v. Citizens' Street R. Co. 166 U. S. 557, 568, 41 L. ed. 1114, 1118, 17 Sup. Ct. Rep. 653; *Grand Trunk Western R. Co. v. South Bend*, *supra*.

In this view, the grant embraced the right to lay the extensions that were needed in furnishing the supply within the city.

This construction of the constitutional provision is the only one that is compatible with the existence of the duty which it was intended as it seems to us, that the recipient of the State's grant should assume. The service, as has been said, was a community service. Incident to the undertaking in response to the State's offer was the obligation to provide facilities that were reasonably adequate.

"*Lumbard v. Stearns*, 4 Cush. 60; *Cumberland Teleph. & Teleg. Co. v. Kelly*, 87 C. C. A. 268, 160 Fed. 316, 324, 15 Ann. Cas. 1210; *Atlantic Coast Line R. Co. v. North Carolina Corp. Commission*, 206 U. S. 1, 27, 51, L. ed. 933, 945, 27 Sup. Ct. Rep. 585, 11 Ann. Cas. 398; *People ex rel. Woodhaven Gaslight Co. v. Deehan*, 153 N. Y. 528, 533, 47 N. E. 787; *Morawetz, Priv. Corp.* § 1129."

It would not be said that either a water company or a gas company, establishing its service under the constitutional grant, could stop its mains at its pleasure and withhold its supply by refusing to extend its distributing conduits so as to meet the reasonable requirements of the community. But this duty and the right to serve, embracing the right under the granted privilege to install the means of service, were correlative.

In *People ex rel. Woodhaven Gaslight Co. v. Deehan*, 153 N. Y. 528, 533, 47 N. E. 787 (approved in *Illinois C. R. Co. v. Chicago*, 176 U. S. 646, 666, 44 L. ed. 622, 629, 20 Sup. Ct. Rep. 509), a grant of authority to lay conduits for conveying gas through the streets of a town, so as to render service to the people of the town, was held to extend as a property right not only to the streets then existing, but to those subsequently opened. The court said: "It is well known that business enterprises such as the relator is engaged in are based upon calculations of future growth and expansion. A franchise for supplying gas not only confers a privilege, but imposes an obligation upon the corporation to serve the public in a reasonable way. The relator is bound to supply gas to the people of the

town upon certain conditions and under certain circumstances, and it would be most unjust to give such a construction to the consent as to disable it from performing its obligations. It cannot reasonably be contended that the relator is obliged to apply for a new grant whenever a new street is opened or an old one extended, as would be the case if the consent applied only to the situation existing when made. When the right to use the streets has been once granted in general terms to a corporation engaged in supplying gas for public and private use, such grant necessarily contemplates that new streets are to be opened and old ones extended from time to time, and so the privilege may be exercised in the new streets as well as in the old."

As to the question of fact, the present case presents no controversy. It was averred, and not denied, that the works of the gas company were established and operated with the intent to furnish gas throughout the city, wherever needed, and that this enterprise had been diligently prosecuted; that a large investment had been made in a plant which was adequate to supply a much greater territory than that reached by the distributing mains when the amendment of 1911 was adopted; that the expense of this installation made it impossible to supply at a profit the limited territory contiguous to the streets then actually occupied by the company, and that if it were confined in its service to that territory it would sustain a constant loss. The company, by its investment, had irrevocably committed itself to the undertaking, and its acceptance of the offer of the right to lay its pipes, so far as necessary to serve the municipality, was complete.

We conclude that the constitutional amendment of 1911, and the municipal ordinances adopted in pursuance thereof, were ineffectual to impair this right, and that the company was entitled to extend its mains for the purpose of distributing its supply to the inhabitants of the city, subject to the conditions set forth in the constitutional provision as it stood before the amendment.

REFERENCES

RATES

552—Renewals.

TUNGSTEN-LAMP RENEWALS ARRANGEMENT IN CHICAGO. *Electrical World*, 1-6 page, May 9, 1914, p. 1054.

This comments on the fact that following the recent announcement of reduction in the price of tungsten lamps, the Commonwealth Edison Company of Chicago advertises that those customers whose contracts for electricity provide for the free renewal of standard carbon lamps may obtain 60-watt tungsten lamps free of cost under the following conditions: Upon the surrender to the company of burnt-out standard carbon lamps (etched and with bulbs intact), the customer will be

entitled to receive in exchange for two such lamps (1) two new standard carbon lamps free, or (2) one standard carbon lamp and one standard tungsten lamp of 60-watt or larger size free, or (3) one standard tungsten lamp of 60-watt or larger size free, and one other tungsten lamp at a specified price. Upon the surrender to the company of a burnt-out tungsten lamp of 10-watt or larger size (etched and with the bulb intact) the customer will be entitled to receive in free exchange therefor a standard tungsten lamp of 60-watt or larger size. The reduced exchange prices for standard tungsten lamps are now as follows: 10-watt lamps, 24 cents each; 15-watt, 21 cents; 20-watt, 16 cents; 25-watt, 14 cents; 40-watt, 12 cents; 60-watt, 10 cents. No charge is made for 100, 150 or 250-watt tungsten lamps.

400—Rate Theory.

RATES FOR ELECTRICITY. *Elec-Tri-City*, $\frac{1}{2}$ page, May, 1914, p. 31.

This gives a simple explanation of the facts underlying the making of scientific electric rates. The statement is made that it is only just to allow the long hour user a much lower rate because his use of the company's equipment is much more economical to the company.

500—Rate Practice.

CONDITIONS, PRACTICE AND DEVELOPMENT IN ENGLISH CENTRAL STATIONS: SECTION 6—RATE CONSIDERATIONS FOR LIGHT AND POWER SERVICE, by CECIL TOONE. *Electrical Engineering*, 2 $\frac{3}{4}$ pages, May, 1914, p. 214.

This gives a general review of rates for electric service as existing in the United Kingdom with occasional reference to continental practice. It is stated that in the present state of electrical development, bulk consumers can be supplied more cheaply than others, and it is an important matter to encourage day loads. Whether or not this will always be so is a question. Doubtless, as stations approach 100 per cent load factor, there will be less justification for encouraging day loads by reduced rates, and the percentage magnitude of the evening peak will become unimportant, but it seems inevitable that the small consumer should always represent a proportionally greater capital outlay by the station. It is asserted that at present the most logical and generally applicable rate is a minimum annual charge determined by the capital cost of the consumer to the station, and a charge per unit which shall be the same for all consumers. With reference to the work of the "Point Fives", it is said that doubts have been expressed as to whether sufficient account has been taken of standing charges by some of the members and as to whether it is wise to supply at 1.0 cent when there is so much business to be done at 2.0 cents, and the efficiency of apparatus is constantly increasing. It would certainly be too much to say that supply at 1.0 or 2.0 cents per unit is justifiable in all cases, but the stability and good work of the "Point Fives" are beyond doubt.

750—Comparative Company Data.

FACTS AND FACTORS OF IOWA CENTRAL STATIONS. *Electrical World*, 1 $\frac{1}{2}$ pages, May 9, 1914, p. 1052.

This gives the table of statistics regarding Iowa Central stations, presented by the facts and factors committee of the Iowa Section, at the recent convention at Cedar Rapids.

INVESTMENT AND RETURN

313—Prices.

THE DETERMINATION OF UNIT PRICES OF MATERIAL FOR PURPOSES OF VALUATION OF PLANT, by R. V. ACHATZ. *Engineering and Contracting*, 2 pages, May 13, 1914, p. 562.

This states that one of the first questions which must be decided in making a valuation of a physical plant is what unit costs of material and labor are to be used. In making a valuation on the cost of reproduction basis, it is agreed that these costs should be present costs but there is a question of just what is present cost. In the case of labor, present cost is a cost based on the current wage scale, but in the case of material it is quite generally agreed that the market price on a given date, particularly for those materials which are subject to constant fluctuations in price, cannot always be used with justice. Many writers, in discussing this question, have said that, in case of materials subject to price fluctuations, the market price on a given date should not be used but an average price over a number of years past, usually five or ten should be adopted. There immediately arises a question as to the propriety of using an average of past prices in a valuation on the cost of reproduction basis, and there is also a large question as to whether such an average actually represents a fair present price. It has been proposed that the present normal price can be determined by plotting the prices for a number of years past and drawing a smooth curve representing an average of the prices as shown by the yearly price curve. There is a detailed study of a trend curve price for copper, tin and lead, with tables, and diagrams of prices.

340—Rate of Return.

LIMITS ON THE RATE OF RETURN. Editorial, *Electrical World*, May 9, 1914, p. 1021.

This discusses the assertion made by Mr. Calvert Townley, at a recent meeting of the New York Y. M. C. A. finance forum, that the principal objects of public service regulation is the limitation of rate of return. The statement is made that in its efforts to limit the return the public should not go too far, that it should see that the return permitted is as large as it ought to be. The times are hard for the borrowing corporation. While the public has introduced methods of regulation that tend to keep the rate of return down, the financial markets of the world have exacted higher interest rates. Between the desire of the public to prevent high rates of return and the refusal of investors to advance more money at doubtful or inadequate rates of return, the corporations are in serious danger of not being able to obtain the capital needed for extensions. If the public chooses so to do, it can decide that the rate of return on capital investment already sunk in a property shall be limited to a certain rate. But it cannot decide arbitrarily what rate future capital investment shall earn. It can say what rate it would like to allow, but if it cannot get the capital at that rate, it loses the benefit that investment of the capital would give. If it says that bondholders should be content with 5 per cent and they will not buy at better than 6 per cent, those who have the capital desired can dictate the terms on which they will lend it.

PUBLIC SERVICE REGULATION

200—Public Service Regulation.

FUTURE REGULATION OF PUBLIC UTILITIES, by WILLIAM D. KERR. Abstract of a Paper Read before the New York Y. M. C. A., May 4, 1914. Article, *Electrical World*, $\frac{3}{4}$ page, May 9, 1914, p. 1028; and Editorial, *Electric Railway Journal*, May 9, 1914, p. 1019.

This discusses the various important points in utility regulation, such as rate of return, depreciation and competition. It emphasizes the need of allowing a return sufficient to afford corporations a profit commensurate with their efforts and

risks, and of providing sufficient depreciation funds. It is said that public ownership is likely to be, and in most cases is, unregulated monopoly, lacking initiative such as characterizes the public utilities under corporate management. The alternative to regulation is public ownership.

The editorial, commenting upon this last point, states that it is an accurate conclusion. The only possible other alternative of private ownership with regulation is private ownership without regulation. It is scarcely thinkable that there will ever be a permanent return to the old conditions of unregulated management of public utilities in this country. Such a return would not be in the interest of either the companies or the public. Out of the progress of the last few decades there was developed a theory that private ownership with public regulation is the logical, fair policy. It means generally the acceptance of monopoly in public utility service in each city or district. Disregarding the confusing cloud of minor issues, the main problem before the utilities now is that of making regulation a permanent success for the companies and the public. Other issues are less important than this. It is true that upon the settlement of other issues such as rate-making, rate of return and valuation, the future of the policy of regulation will largely depend. It is also true, however, that it is better for the public and the companies to lose some points on minor issues in order that the entire policy of regulation may not be a failure. All the parties concerned should work toward the goal of success in regulation with a willingness to sacrifice, if necessary, something small in order to attain the large end.

200—Public Service Regulation.

UTILITY MATTERS AND RECENT DECISIONS OF PUBLIC SERVICE COMMISSIONS, by A. G. RAKESTRAW. *Electrical Engineering*, 1 page, May, 1914, p. 222.

This discusses the general powers conferred upon commissions by the laws of the various states, and gives a brief review of various important commission and court decisions.

268—Public Service Laws.

THE PUBLIC SERVICE COMMISSION LAW, by JNO. C. HALL. To be read before the Annual Convention of the Missouri Electric, Gas, Street Railway and Water Works Association, May 21-23, 1914.

In this paper Mr. Hall gives an informal account of a trip taken as the representative of the Missouri Association for the purpose of explaining to the utilities the various provisions and requirements of the Public Service Commission Law, and, incidentally, to secure new members for the Association. It is said that the general impression throughout the State is that Missouri has a good Public Service Commission law; that Governor Major has appointed good men as members of the Commission and that the utilities as well as the consumers are to be benefited in the long run. The only existing fear—and this is especially true among the smaller utilities—is that they will not be ready and prepared to comply with all of the Commission's orders and rulings when issued.

MUNICIPALITIES

800—Municipalities.

ONE CITY, ONE FARE: ELEVATED AND SURFACE TRACTION SYSTEMS OUGHT TO BE UNITED IN ONE SYSTEM. *Weber's Weekly*, 4 pages, May 16, 1914.

This discusses the traction situation in Chicago and outlines the conditions under which the 1907 ordinance, requiring that the companies pay to the city 55 per cent

of their profit, was passed. The results of the company valuation and city valuation of the elevated railroads are given, and the assertion made that the company valuation, made by Professor Swain, Engineer of the Massachusetts Railroad Commission, was more trustworthy than the city valuation which was made by a commission completely dominated by Engineer J. J. Reynolds, who for a long time was in the employ of the Hearst newspapers under Mr. A. M. Lawrence. The statement is made that Chicago ought to have a One-City One-Fare system. To obtain it there must be unified surface and elevated service. To bring this about a reasonable valuation must be conceded to the elevated system. The fact that to do so might possibly, for a time, reduce the City's 55 per cent receipts is not a good argument against it, because the first consideration ought to be good service, and the elevated system cannot be forced into concessions that will be unlawfully unjust to its investors. Neither the City, the legislature, nor the courts can compel the elevated investors to enter into an unjust agreement. Therefore the conclusion in the whole matter is that the City authorities should act reasonably and devote themselves to bringing about the most satisfactory arrangement possible.

830—Public Ownership.

PUBLIC OWNERSHIP IN FRANCE. Editorial, *Electric Railway Journal*, May 9, 1914, p. 1021.

This discusses various facts concerning government ownership in France which have been brought out by Yves Guyot in his recent book, "When and Why Public Ownership Has Failed", and by a popular article, on government ownership in France, published recently in the *Saturday Evening Post*. Reference is made to the poor service, the slowness in making improvements, and the reluctance, that is usually shown, in most cases of government ownership, in regard to giving an exact statement of the financial operations and conditions. It is pointed out that such results are not an argument or even an excuse for public ownership. It is said that in the days of the millenium, perhaps, there may come that civic righteousness that will make possible a union of the forces of operation and regulation, but until that time they would better be kept separate. When political units operate, they must regulate themselves, and the result is not better public service. The operation of utilities is inherently adapted to private enterprise, whereas the function of the state and municipality is proper and just control thereover.

831—Purchase by Municipality.

COMPULSORY SALE OF UTILITIES. Editorial, *Electrical World*, May 9, 1914, p. 1023.

This discusses the compulsory sale of utilities to the London County Council, provided the Council decides to enter upon municipal ownership. It is said that while some British undertakings have been successful, in this respect the municipal ownership situation is simply what is to be expected. That is, when an enterprise is well handled under favorable conditions, it succeeds whether publicly or privately owned; if the management is bad and the conditions unfavorable—a situation more likely to arise in the case of a municipal plant than one privately owned—the results are unsatisfactory. The danger, which compulsory sale has for the investor (since the terms are based on the value of the plant, buildings, and mains at the time of purchase, without regard to good will), is pointed out. It is said that the London situation is nearly enough related to our own to be worth critical study. English opinion, indeed, seems to turn favorably toward the recent American rule of commissions as a successful remedy for the disease of deferred and uncertain municipal ownership. It is clear that under American Conditions municipal ownership and operation of electric supply is likely to prove disadvantageous—even more so than the activities of the most unwise commission. Municipal partnership as tried in Germany is a possible middle course, yet the results obtained from it have not always been encouraging. The fundamental purpose either of municipal ownership or municipal and state regulation is to furnish to the consumer the best facilities for supply at a reasonable price. The

situation in London is not such as to compass this desirable end finally, and it looks very much as if the American Commission system, with all its faults, were a more promising solution of the manifold difficulties. Commissions are learning by experience, and unless the present trend of affairs changes, they are likely to end, on the whole, in giving far more nearly proper treatment to all parties than can be obtained by the more drastic methods now threatening supply companies in London.

840—Public Operation.

LOS ANGELES DECIDES ON MUNICIPAL OPERATION. *Electrical Review*, 1/6 page, May 16, 1914, p. 971.

This discusses the outcome of the recent power-bond election in Los Angeles. A two-thirds' vote was necessary to authorize the bonds and the issue was carried by 56,199 to 23,179. There are now three companies serving the city of Los Angeles. It is said that the present program of the city is to acquire one of the existing systems by condemnation.

830—Municipal Ownership.

THE BRITISH PRIME MINISTER ON GOVERNMENT OWNERSHIP. Article and Editorial, *Concerning Municipal Ownership*, May, 1914, p. 111, and p. 101.

This quotes the reply of Prime Minister Asquith to a delegation which called upon him recently to urge government ownership of railroads, as follows: "There are practical difficulties of a very serious kind in the application of nationalization to railways. I am quite sure that any such operation, carried out on reasonable and equitable terms, would be immediately followed by very large demands from two entirely different quarters—from traders for better terms in the matter of rates, and, on the other hand, from the railway workers for better conditions and hours of labor, and that prospective advance in the receipts which is predicted would, I strongly suspect, be more than swallowed up before the railways had been in the possession of the state for more than twelve months. These are things which, looked at from the point of view of the taxpayer and the general community, you cannot leave out of account." The editorial states that it is generally admitted that the British civil service is less subject to mere partisan interference than the civil service in the United States. If the British people so frankly and cheerlessly admit, as they do today, the utter failure of government ownership in the United Kingdom, it would be absurd and childish to attempt any such innovation in this country.

GENERAL

980—Public Relations.

THE FOUNDATION OF GOOD PUBLIC RELATIONS. Editorial, *Electric Railway Journal*, May 9, 1914, p. 1020.

This comments on the paper by Mr. P. T. Crafts, referred to in 5 RATE RESEARCH 95, urging that complaints be treated in a dignified way, the company avoiding the assumption of blame for conditions for which it was not responsible just as much as it avoids the appearance of indifference, to any complaint. It is said that the impression to be conveyed by the company should be that of intention to right the trouble if one exists, of willingness to receive information and of command of the situation. Such an attitude is not inconsistent with affability of the right sort, but it requires personality, bigness of mind and heart on the part of the representative of the corporation. When relations with the public are involved, or, in fact, with anyone who understands what fair and reasonable thinking are, such a position is necessary. To carry out a policy of this kind small men are

useless because they will either be cringing or domineering. The kind of men required are those who have the ability to put themselves in the place of the customer or patron as well as the capacity to infuse a like spirit in all the representatives of the company who are brought into contact with the public. If a complaint is made, the chances are that there is some foundation for it. The cause should be sought, and if it can be remedied every effort should be made to do so. If this is not possible the reason should be made clear to the offended patron. If this plan is followed the idea will certainly grow that the company is anxious to do all that it can do to make the service satisfactory, and the public will then be more inclined to be lenient in regard to matters which are beyond the control of the utility.

980—Public Relations.

THE PROBLEM OF POPULAR EDUCATION. Editorial, *Electric Railway Journal*, May 9, 1914, p. 1020.

This discusses Mr. Henry C. Hazzard's paper on publicity policy, referred to in 5 RATE RESEARCH 111. It is asserted that while direct publicity is desirable, indirect publicity brings about the best results in popular education. A national advertising campaign of fact and argument and propaganda, designed to reach every section of the country, would be so costly that there is no immediate prospect of its being carried out. A limited direct campaign supplemented by a broad and intelligent indirect publicity campaign is, on the other hand, as practicable as it is desirable. If new proof is wanted of the truth of this statement, we have only to refer to the publicity campaign conducted by steam roads in support of their application for an increase in freight rates.

910—Promotion and Growth of Business.

MERZ AND McCLELLAN ON LONDON ELECTRICITY SUPPLY. Article and Editorial, *Electrical World*, 2 pages, May 9, 1914, p. 1030 and p. 1021.

The above article gives a summary of the information, contained in the appendices of the Merz-McLellan report (see 5 RATE RESEARCH 111), concerning the electrical energy systems in London and other large cities of the world.

The editorial comments on the estimates for financing the amalgamation, made in the report, and states that in order that disappointment may not follow any over-enthusiasm in the advance estimates, it is important that the figures be reviewed with great care and conservatism. The best way of attaining the advantages sought is to recognize that capital losses are unavoidable and that proper provision should be made for them within a reasonable period of years. There should be an agreement between the constituted authorities and the public, and the facts should be clear. This country has much to suggest to London in examples of concentration in energy generation, but it has not dealt as frankly with the public as does the London report, on the question of abandoned elements of plant cost. The report therefore carries a lesson to central-station managers here.

COURT DECISION REFERENCES.

111—Incorporation.

STATE ex rel. UNION ELECTRIC LIGHT & POWER CO. v. REYNOLDS et al., Judges. Decision of the SUPREME COURT OF MISSOURI. April 2, 1914.

The court here awards an absolute writ of mandamus to compel the transfer of the case of *Sager v. Union Electric Light and Power Company* (wherein it is sought to oust the Union Electric Light and Power Company of its corporate charter and thereby of its rights to do business in the state) from the St. Louis Court of Appeals to the Supreme Court of Missouri. The decision deals entirely with technical legal matters.

Vol. 5

May 27, 1914

No. 9

RATE RESEARCH



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RATE RESEARCH COMMITTEE
OF THE
NATIONAL ELECTRIC LIGHT ASSOCIATION
120 WEST ADAMS STREET - - - CHICAGO

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Rate Research

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Rate Research

Vol. 5

CHICAGO, MAY 27, 1914

No. 9

For statement of facts and opinions contained in papers abstracted herein, the Association does not hold itself responsible

COMMISSION DECISIONS

WISCONSIN

720—Rate Schedules.

COMPLAINT VS. MONROE ELECTRIC COMPANY, Alleging Unreasonable and Excessive Rates for Electric Service. Decision of the WISCONSIN RAILROAD COMMISSION, Fixing Rates. April 6, 1914.

The usual valuation of the property and investigation of the revenues and expenses was made to determine reasonable rates for all classes of service.

615.1—Limited Hour Service.

Respondent asks that it be permitted to enforce a rule requiring consumers using current for power to discontinue use of current during the peak load on the plant or to pay a greater rate if current be taken at that time. Judging from the information now before the Commission, it seems that a rule of this kind is not unreasonable in this instance because usually the lowest rates should be given to those who can be supplied most cheaply.

COMMERCIAL LIGHTING.

Rate.

12 cents net per kilowatt-hour for the first 30 kilowatt-hours per month per per active kilowatt of connected load.

9 cents net per kilowatt-hour for the next 60 kilowatt-hours per month per active kilowatt of connected load.

4 cents net per kilowatt-hour for all use in excess of 90 kilowatt-hours per month per kilowatt of connected load.

Determination of Active Connected Load.

Same as specified in schedule of Stevens Point Lighting Company, given in 5 RATE RESEARCH p. S3.

Minimum Charge.

\$1.00 per month per meter.

Terms and Conditions.

A monthly charge of 25 cents, in addition to the regular charge for current, shall be made for the use and maintenance of four-light clusters installed complete at the expense of the company. The company is to furnish free tungsten lamp renewals of any size desired for the first five years after the installation of the cluster, at the end of which period the cluster complete and installed shall become the property of the consumer and the monthly rental charge of 25 cents shall cease.

COMMERCIAL POWER.

Limited Use.

This rate shall apply to consumers not using current from 4:30 p. m. to 10.00 p. m. during the months of November, December, January, February and March, and from 6:00 p. m. to 10.00 p. m. during the months of April, May, June, July, August, September and October.

Rate.

Service Charge.

\$70.00 net per month for active horse power connected.

Energy Charge.

3 cents per kilowatt-hour for the first 70 kilowatt-hours per month per active horse power connected.

2 cents per kilowatt-hour for all current in excess of 70 kilowatt-hours per month per active horse power connected.

The sum of the service and energy charges shall not exceed 10 cents per kilowatt-hour if the total bill exceeds the minimum monthly charge.

Minimum Charge.

The minimum monthly charge for this schedule shall be 50 cents per horse power connected.

Determination of Active Load.

90 percent of the first 10 h.p. shall be deemed active.

75 " " " next 20 " " " " "

60 " " " " 30 " " " " "

50 " " all over 60 " " " " "

Except, however, if capacity of the motor exceeds the possible load, total possible load shall be deemed horse power connected.

Unlimited Use.

The foregoing power schedule plus 10 cents per active horse power in the service charge shall apply to use of current for power not limited as to time.

COOKING.

Rate.

7.5 cents net per kilowatt-hour for the first 15 kilowatt-hours per month per kilowatt of active load.

5 cents net per kilowatt-hour for the next 30 kilowatt-hours per month per kilowatt of active load.

3 cents net per kilowatt-hour for all use in excess of 45 kilowatt-hours per month per kilowatt of active load.

Determination of Active Connected Load.

Twenty per cent of the rated capacity of cooking equipment shall be deemed active.

If not more than 20 per cent of the connected load is power, the whole shall be deemed heating.

Incidental appliances not exceeding 600 watts for any one appliance such as electric fans, flat irons, private washing machines, toasters, ranges of under 1.5 kilowatts and other similar household conveniences, shall be placed on the lighting rate but omitted from the calculation of connected load. That portion of the rated load in excess of 600 watts for any one appliance shall be added to the connected load in computing the active load. It is further provided that any consumer having a connected load of over 2 kilowatts consisting of the above appliances including motors, may at his option, have a power meter installed and pay for the current consumed by such load at the power rate.

Minimum Charge.

The minimum bill for this schedule shall be \$1.00 per month.

STREET LIGHTING.

Rates for this service were left unchanged, and are as follows:

\$24 per year for tungsten lamps burning 4,000 hours.

\$18 per year for tungsten lamps burning 1,450 hours.

\$65 per year for 4 ampere series magnetite arcs for all night service.

NEW YORK (1st D.)**244—Rehearings and Appeal.**

Rehearing of the Complaint of SAKS & COMPANY against the NEW YORK EDISON COMPANY. Decision of the NEW YORK PUBLIC SERVICE COMMISSION (1st D.), Reaffirming Former Decision. February 6, 1914.

The order, upon which the respondent company applied for a rehearing, held that the "rider", establishing a special rate for current supplied to these customers upon whose premises a substation is located, was unjustly discriminatory under the circumstances in the case (3 RATE RESEARCH 154). The Commission says that the evidence submitted on rehearing alters no essential fact and is largely a repetition of evidence submitted in previous hearing.

Rehearings are not for the purpose of giving each party to a proceeding an opportunity to bring in testimony that was available or that could easily have been obtained before the original hearings were closed. If they were, such practice would very likely lead to the submission of an incomplete case in the first instance. One side or the other would be apt to submit a part of its evidence and see what sort of a decision it could get by such incomplete statement. If it was successful, it would be satisfied but if the decision went against it, it would then come back for a rehearing, submit other evidence and try to get the decision set aside, possibly continuing this practice again and again.

It is evident that such methods would neither aid orderly procedure nor facilitate the prompt and wise adjudication of cases coming before the Commission. All should understand that every case should be completely presented at the original hearings and that evidence submitted on rehearing should be confined to new facts or to conditions which have changed since the close of the original hearings.....

COURT DECISIONS**MARYLAND****226.2—Extension of Service.**

PUBLIC SERVICE COMMISSION OF MARYLAND v. BROOKLYN & C. B. LIGHT & WATER CO. Suit to Set Aside an Order of the Commission Directing the Company to Make Certain Extensions. Decision of the COURT OF APPEALS OF MARYLAND, Setting the Order Aside as Unreasonable. February 25, 1914. 90 Atlantic 89.

The Brooklyn and Curtis Bay Light & Water Company held a franchise permitting them to extend their mains into the town of Brooklyn in Anne Arundel County, Maryland; but they had never extended their mains farther than within a mile of the town. The town of Brooklyn applied to the Public Service Commission for an order directing the company to furnish water in the town; and the commission made this order, although the company claimed that it could not afford to make the extension, and that such extension would be unprofitable. The case was carried to the court where the company gave expert evidence to show that the cost of the extension would be greater than as allowed by the commission, and that the company would be unable to finance the work. The court reverses the decision.

There are cases to the effect that a railroad company may be required to perform a particular duty necessary for the convenience of the public, even though it may involve some pecuniary loss to the company. *Atlantic Coast Line v. N. Car. Corp. Com'n*, 206 U. S. 1, 27 Sup. Ct. 585, 51 L. Ed. 933, 11 Ann. Cas. 398; *Mo. Pac. Ry. v. Kansas*, 216 U. S. 262, 30 Sup. Ct. 330, 54 L. Ed. 472. But we know of no case holding that a public service corporation may be required to extend its plant into territory that it has not attempted to serve when the probable revenues to be derived from such service are not sufficient to pay the interest on the cost of the extension and the maintenance of the service, and is unable to sell its bonds for that purpose. Such a requirement would not only endanger the service the appellee is now rendering in Curtis Bay, but would result in disaster to the company and ultimate confiscation of its property.

REFERENCES**RATES****612.2—Large Power.**

PURCHASED ENERGY FOR ELECTRIC RAILWAYS. Abstract of an Address by PETER JUNKERSFELD before the Illinois Electric Railway Association, Chicago, May 15, 1914. *Electrical World*, $\frac{1}{2}$ page, May 23, 1914, p. 1139.

In this address, Mr. Junkersfeld drew attention to the immense increase, in the last decade, of the amount of purchased electrical energy for the operation of electric railways. It is said that economic reasons, of course, account for this

development. The electric-service company specializes in the production of electrical energy, and by serving the diverse wants of the community and by utilizing the most economical apparatus in large units it is often able to sell electricity for the operation of electric railways cheaper than the electric-railway companies can manufacture it.

623—Power Factor.

INCREASING THE POWER-FACTOR. Editorial, *Electrical Review*, May 23, 1913, p. 1006.

This is a discussion of the consequences of low power-factor, and of the various methods whereby power-factor may be controlled.

400—Rate Theory.

THE A. E. R. A. FARE RESEARCH BUREAU. *Electric Railway Journal*, $\frac{1}{2}$ page, May 16, 1914, p. 1080.

This describes the questions which are to be taken up by the Bureau of Fare Research of the A. E. R. A., reference to which was made in 4 RATE RESEARCH 61. Comment is made on the appointment of Frederick W. Doolittle as director.

616—Official or Government Rates.

MUNICIPAL ISOLATED PLANT SCHEME RELINQUISHED AT SPRINGFIELD, MASSACHUSETTS. *Electrical World*, 1-6 page, May 23, 1914, p. 1136.

This gives the terms of the new contract recently agreed upon between the city and the United Electric Light Company, for the lighting of the city buildings in the urban center.

612.2—Large Power.

ELECTRIC POWER CONTRACTS, by PROF. WILLIAM L. PUFFER. Read before the National Association of Cotton Manufacturers, Boston, Massachusetts, April 29-30, 1914.

This comments on the lack of understanding existing between purchaser and seller of electric power, due to a complete want of knowledge by the purchaser of the terms used by the seller. There is an explanation of the general type of power contract, and a detailed consideration of the terms used, such as demand, load factor, and power factor. The general methods of procedure followed by companies in connection with contracts, are explained, and consumers are advised as to the significance of the various provisions.

610—Character of Service.

COMMERCIAL PROGRESS AT PROVIDENCE, R. I., DURING 1913. *Electrical World*, Article and Editorial, 2 pages, p. 1103, and p. 1077.

This refers to the large amount of business which the Narragansett Electric Light Company, of Providence, R. I., has secured in 1913. Reference is made to the sales of electric appliances, and to the company's encouraging the use of these appliances by its new lighting rate "C," which is given in 4 RATE RESEARCH 83. A table is given showing the estimated income from electric appliances.

The editorial calls attention to the fact that a study of the table of incomes shows that a large connected load per appliance by no means always indicates the maximum annual revenue, the conditions being very different from those obtaining in the motor field. The statement is made that load-factor is not everything in the marketing of energy for use in devices for convenience in domestic or business fields, but there is no escaping the fact that long-hour use of connected load is a decidedly profitable thing to encourage, even where the wattage of the equipment units is individually low. If it has not already been done, it is time some central-

station man with favorable conditions and a family of fair size put an independent meter on each kind of energy-consuming device in his home for a year and give the results to the industry. Until a study of this kind is made public, there will be room for much discussion as to the earning power of appliances at stated rates.

750—Comparative Company Data.

OKLAHOMA RATES AND REVENUES, by L. W. W. MORROW. Paper presented before the Oklahoma Gas, Electric & Street Railway Association, Oklahoma City, May 13-15, 1914. 22 pages.

This is a compilation, by the assistant professor of electrical engineering of the University of Oklahoma, of data showing present conditions of electric companies in Oklahoma. The table shows for practically every plant in the state, the following: bonds, interest, capital stock, gross receipts, gross operating expenses, capacity, domestic rate, ratio of gross receipts to gross expenses, receipts per kilowatt capacity, expenses per kilowatt capacity, minimum charge, power rate, kind of fuel used, cost of fuel delivered, and city contract, rate and schedule. It is said that, during the process of compilation of the data, the larger plants and those controlled by holding companies showed marked superiority in accounting methods; and that the municipal plants showed an unwillingness or inability to give information.

611.1—Residences.

HANDLING THE SMALL CONSUMER IN EUROPE, by S. E. DOANE. *Electrical World*, Article and Editorial, 21 pages, May 23, 1914, p. 1157 and p. 1133.

This article, published by special arrangement with the N. E. L. A., will be reprinted for the Philadelphia convention as an appendix of the committee on the wiring of existing buildings, R. S. Hale, Chairman. It gives a detailed and illuminating account of the methods by which European central stations are furnishing electricity for domestic purposes to the very smallest consumers. The data given bears chiefly on three things—methods of getting business, methods of making installations, and collection of charges for service. In making the investigation, it was found that chief interest centered in Germany and some places in Italy, Austria and Switzerland having followed rather than led, and developments in France having been quite backward. As regards England, time did not permit of covering the ground fully, but enough was seen and heard to indicate that Germany offered the best field in that particular matter. The conclusion reached is: (1) That the small customer has become an important source of revenue to many of the central stations in Europe; (2) that the possibilities of this source of income and the degree to which it is being appreciated by the European central stations are growing constantly as the efficiency of the methods of transforming electricity into light is improving. It may also be predicted that in the near future the small customer will become recognized as of greater value to the central station than heretofore. It is to be observed that to bring this about will involve radical changes in the present methods of billing, metering, meter reading, inspection, methods of introducing services, lamp-renewal policies, rates for energy, etc. Much of the work done in connection with the small consumer depends on a cheap form of demand indicator. There are many such on the European market costing in the neighborhood of a dollar. The article is supplemented by a large chart showing the wiring schemes in various European cities in minute detail; and is profusely illustrated with photographs showing exterior and interior views of houses connected, fittings used, advertising schemes, soliciting schemes, forms of bills, various types of inexpensive maximum demand indicators, etc.

The editorial urges the soliciting of this business in America. The statement is made that the secret of the success reached on the Continent in dealing with these small consumers seems to be in coupling a cheap wiring system on the instalment plan with a flat-rate method of charging which makes the price to be paid perfectly definite and collects it in advance. There are few American cities in which a similar policy would not bring profitable results when once fairly under way.

INVESTMENT AND RETURN

330—Capitalization.

COST OF FINANCING UTILITIES, by A. F. HOCKENBEAMER. Abstracted from an Affidavit Filed in the U. S. District Court. *Journal of Electricity, Power and Gas*, 4 1-3 pages, May 16, 1914, p. 425; *Electrical World*, 1 page, May 16, 1914, p. 1087; *Electric Railway Journal*, Article and Editorial, 3 pages, May 16, 1914, p. 1074 and p. 1067.

This affidavit, presented by the Pacific Gas & Electric Co. in a San Francisco rate case, is an analysis of the conditions under which the public utility companies in California are required to raise new capital, of the cost of money, and of the necessity of an adequate rate of return. There is a detailed consideration of the expenditures which utilities are compelled to make; the capital required for obligations maturing; the status of gas and electric investments; the cost of capital; the necessity for other than borrowed capital; earnings and sale of stock; the importance of an established confidence; and the permanency of the duties of public utility enterprises, in that the property of a gas and electric enterprise is irretrievably placed in the service of the public and its owners cannot at their will, wind up the affairs of the corporation and liquidate and distribute its assets. It is pointed out that the company's stock must be sold on a basis of providing a reasonable assurance of a return of 10 per cent; and that this is not an unreasonable profit, when the earnings of the national banks show an average annual profit in excess of 9 per cent and the greater hazard of the public utility business is conceded.

300—Investment and Return.

RAILWAY FREIGHT RATES AND PROSPERITY. *Engineering News*, 1 page May 14, 1914, p. 1086.

This comments on the short-sightedness of the popular mind, when it assumes that increased expenses heaped upon the railroads, will come out of the pockets of the railway bondholders and stockholders. The gravity of the present situation of the railroads is pointed out. The statement is made that in order that the railways may have cars enough to carry the steadily increasing volume of shipments, the yard room in which to handle these cars, and freight stations sufficient to handle the freight without congestion, such as blocked the whole wheels of industry in many parts of the country in the fall of 1907—in order that the railways shall be able to pay for all these necessary things, it is absolutely essential that they shall be able to go to the investor, the savings bank, the insurance company, the man who saves a little money for his old age, and induce them to buy the stocks or bonds or notes of the railway company. Railway investors, not only in this country, but the world over, are watching intently to see whether this moderate increase in traffic rates will be sanctioned by the Interstate Commerce Commission. If it is granted, there is good reason to believe that the world's treasuries will be unlocked to supply the reasonable needs of American railways. Should it be refused, however, there would result a destruction of public confidence in railway investments, the disastrous effect of which it would be difficult to overestimate.

319.1—Water Power Rights.

SUPREME COURT DECISION REGARDING CAPITALIZATION OF WATER RIGHTS. Article and Editorial, *Journal of Electricity, Power and Gas*, 1½ pages, May 16, 1914, p. 424 and p. 434.

The above article quotes in full the recent United States Supreme Court decision in the San Joaquin and Kings River Canal and Irrigation Co. case, holding that

capitalization of water rights, in estimating plant valuation for rate-making purposes, should be allowed.

The editorial points out that no court has questioned the capitalization of water rights except for irrigation. The question has been raised by railroad commissions in the case of hydro-electric power companies and consequently this decision is of wide interest. This particular decision deals with these rights in connection with the sale of water for irrigation purposes but the contention of the court, that by such sale all do not benefit directly, but a part of the people only, and for their private benefit, makes this ruling applicable to all utilities utilizing water rights—hydroelectric companies with others. The statement is made that this decision does not state specifically that all water rights may be capitalized, those appropriated as well as those acquired for a valuable consideration, but it practically establishes the principle that not to permit capitalization of water rights is to deprive the owner of them without due process of law, which is an infringement of constitutional rights.

380—Taxation.

REPORT OF COMMITTEE ON TAXATION OF PUBLIC SERVICE CORPORATIONS, by CHARLES J. BULLOCK. Reprinted from Proceedings of the National Tax Association, Volume 7, 14 pages.

This report considers solely the question of the equalization of taxation upon public service corporations subject to ad-valorem taxation. The committee holds that, whether public service corporations are taxed at local or at average state rates, they should be subject to the true, and not the nominal, rates of state or local taxation. So long as undervaluation of other property continues, therefore, the committee holds that either the valuation of public service corporations should be made on the same basis as that of other property, as is the practice in a few states, or that the corporations should be taxed at the true rate imposed upon other property, as is the practice in Wisconsin. Better still would be the eradication of the evil of undervaluation of property by the local assessors as is now attempted in Kansas, Arizona, Colorado, and New Mexico; but this must necessarily be a work of time, and in the interim public service corporations are entitled to fair play.

PUBLIC SERVICE REGULATION

221.1—Issue of Stocks and Bonds.

RESPONSIBILITY OF COMMISSIONS. Editorial, *Electrical World*, May 16, 1914, p. 1077.

This comments on the fact that in its first annual report the Missouri Public Service Commission raises the question of its obligation to investors who are influenced in their purchases by the fact that securities have been approved by the commissions and therefore supposedly represent value; and that the commission has announced its intention of following the policy adopted by the New York Public Service Commission (2nd D) (in the Hudson Electric Power Co. case), that the commission should satisfy itself that the contemplated purpose is a fair business proposition, but should not undertake to reach and announce a definite conclusion that the new construction or improvement actually constitutes a safe or attractive basis for investment. It is said that this problem is a very trying one for the commissions. It is not clear how a state can escape a moral obligation in the matter. Certainly the state cannot fairly approve securities which it knows will not be good in order to help a corporation to get funds to provide needed or wanted service. The burden is clearly upon a commission to do everything that it properly can to make securities issued under reasonably justifiable conditions good.

112.1—Intermediate Permits.

EFFECTS OF THE INTERMEDIATE FRANCHISE UNDER STATE REGULATION, by WILLIAM J. NORTON. *The Annals of the American Academy of Political and Social Science*, May, 1914, p. 135.

This paper, applied to the Missouri situation, was read before the Missouri Electric, Gas, Street Railway and Water Works Association, May 21-23; and, applied to the Oklahoma situation, was read before the Gas, Electric & Street Railway Association of Oklahoma, May 13-15.

It contains a consideration of the use of the indeterminate form of franchise, both before and after its being adopted in the state public service regulation laws of Wisconsin and Indiana. There is a discussion of the provision in most state laws that a public utility enterprise is to be protected from competition by private or municipal plants. In conclusion, a comparison is given of the relative advantages of the term and the indeterminate form of franchise. The paper advocates the general adoption of the indeterminate permit provision in connection with state regulation of utilities. Footnotes, referring to the various sources, give important bibliographical information.

200—Public Service Regulation.

STATE REGULATION OF PUBLIC UTILITIES. *The Annals of the American Academy of Political and Social Science*, v. 53, no. 142. May, 1914, 357 pages.

This contains much valuable material on public service regulation, classified under the headings (1) Legislation as to state utility commissions, (2) State regulation and municipal activities, (3) Uniform accounting and franchises, (4) Public control over securities, (5) Valuation of public utilities, (6) Electric and water rates, and (7) Standards for service. The following is a list of the papers contained in the volume, which will be of special interest to electric companies:

Methods of Judicial Review in Relation to the Effectiveness of Commission Control, by Oscar L. Pond.....	p. 54.
Effects of State Regulation Upon the Municipal Ownership Movement, by Delos F. Wilcox.....	p. 71.
Effect of State Regulation of Public Utilities upon Municipal Home Rule, by J. Allen Smith.....	p. 85.
State Versus Local Regulation, by Stiles P. Jones.....	p. 94.
Effects of the Indeterminate Franchise Under State Regulation, by William J. Norton.....	p. 135.
Should the Public Utilities Commission have Power to Control the Issuance of Securities? By John M. Eshleman.....	p. 148.
Rate of Return, by James E. Allison.....	p. 172.
Capitalization of Earnings of Public Service Companies, by Morris Schaff.....	p. 178.
Certain Principles of Valuation in Rate Cases, by Robert H. Whitten.....	p. 182.
Depreciation, by James E. Allison.....	p. 198.
Non-Physical or Going Concern Values, by Halbert Powers Gillette.....	p. 214.
Recent Tendencies in Valuations for Rate-Making Purposes, by Edwin Gruhl.....	p. 219.
Electric Lighting and Power Rates, by Halford Erickson.....	p. 238.
Regulating the Quality of Public Utility Service, by J. N. Cadby.....	p. 262.
Service Regulations for Electrical Utilities, by L. H. Harris.....	p. 285.

200—Public Service Regulation.

SOME LEGAL ASPECTS OF THE REGULATION OF PUBLIC SERVICE CORPORATIONS, by CHARLES F. MATHEWSON. Address before the Y. M. C. A. Finance Forum, New York. *Electrical World*, 1 page, May 16, 1914, p. 1090; *Electric Railway Journal*, $\frac{3}{4}$ page, May 16, 1914, p. 1111.

This states that the most essential consideration to customers is efficiency of service, and any mistaken theory or imposition which compels a public service

corporation to sacrifice efficiency to lower rates is, and will sooner or later be recognized to be, a greater misfortune to the public than to the corporation. Rate making is, of all manifestations, Mr. Mathewson declared, the most serious and common aspect to public service corporations of the special regulatory power of the State. If a legislative act fixing rates is passed in the usual manner, it is possible that it does justice, but if it does so, it is usually due to Providence only; and such legislation, where a commission is in existence, is vicious to the last degree in principle and usually in result. On the other hand, a commission, said Mr. Mathewson, may proceed at leisure. It has opportunity for complete examination of all essential facts. Its members are in office for a term of substantial length, so that they should be more independent of popular disfavor or popular acclaim than are legislatures.

112—Franchises.

CITY OF LANSING V. MICHIGAN POWER COMPANY. REPLY BRIEF OF DEFENDANT AND APPELLEE. Pamphlet, 13 pages.

This is the company's reply brief in the Michigan Power Company franchise case. On page 5 attention is called to the decision of the Supreme Court in *RUSSELL V. SEBASTIAN* (see 5 RATE RESEARCH 117), in which the same questions (1) that of the nature of the rights conferred by the legislative act, and (2) that of the right of the company to make extensions, notwithstanding change in constitutional policy with regard to franchises, are discussed.

MUNICIPALITIES

840—Municipal Operation.

SAN FRANCISCO MUNICIPAL RAILWAY REPORT. Editorial, *Electric Railway Journal*, May 23, 1914, p. 1128.

This characterizes the Geary Street Municipal Railway report as a valuable contribution to electric railway financial data, since it is the first municipal railway report in this country, that has been presented on a sufficiently standardized basis and in sufficient detail to permit a ready analysis of the results of municipal versus private operation. There is a discussion of the capital account, the omissions therefrom and the rate of return on the stated total investment. It is asserted that conditions point to a decline rather than to an increase in the net income.

830—Public Ownership.

MR. McCARTER ON MUNICIPAL OWNERSHIP. Editorial, *Electric Railway Journal*, May 23, 1914, p. 1129.

This discusses the arguments advanced against public ownership by Mr. McCarter as noted in 5 RATE RESEARCH 141. The editorial states that the voice of Mr. McCarter on the public ownership issue is needed. It avers that there is not a strongly-defined tendency toward municipal ownership in this country at this time. There is however, a strongly developed radical movement. Some of the functions and avenues of government are in the hands of radical individuals who do not know much about the danger of the courses which they advocate and who care less. They should not be allowed the free rein in action which they claim in speech. Every influential voice that can be raised against proposals to recast radically the national customs and institutions should make itself heard. If municipal ownership does come in time the approach to it should be through sober channels with a full recognition of the rights of the companies whose properties are taken as the basis for public systems. The clauses in some of the recent electric railway

franchises, giving cities the right to acquire the property eventually, are outcroppings of tendencies, like the bill pending in Congress, on which the conservative forces of the times should express their opinion.

830—Public Ownership.

AMERICAN ASSOCIATION AGAINST PUBLIC OWNERSHIP IN CITY OF WASHINGTON. *Electric Railway Journal*, 5 pages, May 23, 1914, p. 1145.

This gives an account of the progress of the hearing on the Crosser bill before the District committee of the House of Representatives. The testimony given by W. D. Kerr, director of the Bureau of Public Service Economics of New York, and by Mr. N. McD. Crawford, president of the Reading Transit & Light Co., Reading, Pa., is outlined.

830—Public Ownership.

ARGUMENTS AGAINST PUBLIC OWNERSHIP IN DISTRICT OF COLUMBIA. *Electric Railway Journal*, 3 $\frac{3}{4}$ pages, May 16, 1914, p. 1091; *Electrical World*, $\frac{1}{2}$ page, May 16, 1914, p. 1088.

The above articles abstract the testimony given before the District Committee of the House of Representatives at Washington, D. C., on May 13, on the Crosser Bill providing for municipal ownership of the street railways in the District of Columbia. Extended testimony was given by Clarence P. King, president of the Washington Railway and Electric Company, and Thomas N. McCarter, president of the Public Service Corporation of New Jersey. At a continuation of the hearing on the following day, Norman McD. Crawford, president of the Reading Transit & Light Company, discussed the subject with particular reference to conditions in foreign cities. Mr. McCarter characterized the whole scheme of public ownership as un-American. It was not suited to the form of government devised by our forefathers and handed down for generations. It would mean bureaucracy galore. It would mean that the government would take on an enormous army of men, and would also mean ultimate operation of the country by the government through this enormous army. The subsidiary companies of the Public Service Corporation of New Jersey had 12,000 employees and served 2,000,000 of the 2,500,000 people in New Jersey. If the same proportion held good throughout the country, there would have to be added to existing government or municipal employees from 600,000 to 750,000 men. A member of the committee said that the federal government now employs 471,000 people.

820—State Regulation of Municipal Utilities.

PROCEEDINGS OF THE FIRST ANNUAL CONVENTION, LEAGUE OF MINNESOTA MUNICIPALITIES. St. Paul, Minnesota, October 16–17, 1913. Prepared by the Municipal Reference Bureau of the General Extension Division, University of Minnesota. Pamphlet, 166 pages.

This contains several addresses on the question of "home rule." State regulation by commission is upheld by Governor Eberhart (see 4 RATE RESEARCH 94), p. 67; by Charles A. Russell, p. 81; and by George C. Mathews, Chief Statistician Wisconsin Railroad Commission, p. 117. "Home Rule" is advocated in addresses by W. O. Clure, Secretary, Home Rule League of Minnesota, p. 91; and by T. C. Richmond, Madison, Wisconsin, p. 137.

Mr. Mathewson's article is especially interesting, since it is a detailed and practical analysis of the workings of commission regulation. State control is not an infringement on local home rule. It is merely a guarantee that the utilities which are supplying our population shall be controlled by an agent powerful enough to effectively supervise their operations. The locality cannot secure the necessary accounting information, it cannot force the keeping of accounts upon a proper basis, the cost of adequate investigations is prohibitive, the locality is handicapped by lack of jurisdiction, and the small cities at least are not in a position

to fight the powerful public utility corporations. The state can and does compel the keeping of the proper records; it can obtain the necessary information at less cost than the cities can, its jurisdiction is not limited by the boundaries of any city or any local unit. It has jurisdiction over the entire operations of the utility. The state commission is in a position to furnish help to both private and municipal utilities which will enable them to fulfill their duties of giving adequate service at reasonable rates, and it is not a bar to municipal acquisition of utility plants and successful municipal operation of those plants is greatly facilitated. Local control cannot stand the test which must be applied to determine the success of regulation. State control has stood this test successfully, and the greater the experience with state control, the more overwhelming the argument is in favor of it.

820—State Regulation of Municipal Utilities.

CO-OPERATION IN OPPOSITION. Editorial, *Journal of Electricity, Power and Gas*, May 16, 1914, p. 435.

This comments on the joint appeal for rehearing made by the company and the California Commission in the Oro case. It is said that is is very elementary that duplication of distribution systems increases the cost to the consumer; is inefficient and wasteful. It is not effective in reducing rates because it adds nothing to the service, than may be added through regulation,—but cost. The purblind selfishness of any public utility which would insist upon competition with rate regulation can not but create suspicion and react upon private ownership in general. It is asserted that one of the great objects to home rule of utilities is the fact that the public themselves, as a municipality, may at any time become the competitors of the utility they regulate, in which event, except at great legal expense (also borne in duplicate by the same public) there would be no power to regulate the regulator. In municipal regulation there is a constantly recurring possibility of injustice which it would be well to anticipate by extending the power of state commissions so that they will be enabled to regulate all the public utility business, municipal or otherwise.

840—Municipal Operation.

MUNICIPAL ELECTRIC POWER PROJECT OF LOS ANGELES. *Engineering and Contracting*, 1-6 page, May 20, 1914, p. 40.

This recounts the results of the Los Angeles power bond election, describes the present state of the city's electric plant, and notes the passage of the resolution by the city council that condemnation proceedings be started immediately for such properties of the private corporations as may be required. The statement is made that the action of the citizens in authorizing the bond issue ends the first chapter of a vigorous campaign that has been waged for the past two years. It now remains to be seen whether or not the city will be able to carry out its plans as regards the municipal distribution of electricity. Certain questions of water rights may arise which may make necessary the abandonment of that portion of the scheme.

GENERAL

149—Holding Companies.

THE UTILITY HOLDING COMPANY. Editorial, *Electrical World*, May 23, 1914, p. 1135.

This questions the wisdom of the holding company representatives, in their arguments before the Senate Committee on May 12, in presenting their case from the financial instead of the operating side. It is said that the burden rests upon the utility holding companies to show that they should not be classed with the general type of holding company, that their operations are limited to local public utilities and that they do not unreasonably restrain trade. These facts are so plain to public utility operators that these men can scarcely realize that their

corporations may be condemned by the new law. The statement is made that the public utility holding company fills a useful place in the economic structure of the country, and it should not be put out of business. The basis of its revenues and growth is the local plant, which is subject to complete regulation by commissions in most states. If local plants are not under this form of regulation, they ought to be. The form of control which has proved to be so salutary where it has had effective trial should be extended to all states. If the public utility holding company cannot justify its existence under the most rigid form of state regulation it will fail and no act of Congress will save it. It should have, however, a fair opportunity to demonstrate its usefulness, and it will not receive such an opportunity unless it is exempt from the general prohibition against holding companies which appears in trust regulation bills.

980—Public Relations.

PUBLIC POLICY OF PUBLIC UTILITY CORPORATIONS, by F. R. SLATER
Read before the Southwestern Electrical & Gas Association, Galveston,
Texas, May 20-23, 1914.

This states that the present undesirable attitude of the public toward the utilities is due to ignorance on the part of the public. The statement is made that it is impracticable to educate the public as a mass, but the individual can be educated and if we educate enough individuals we will finally have the whole public educated. This can only be accomplished, however, through a broad, carefully planned campaign, carried forward through the technical press, monthly periodicals, daily press and personal effort with patrons. This cannot be accomplished in a day, or probably in a year, but it must be accomplished before the utility can hope for any material improvement in the attitude of the public toward its business. No more just or fair tribunal can be secured than the mass of the people, provided that they can make their decision with a full knowledge of the facts. It is the want of knowledge that breeds suspicion. To get a knowledge of the facts before the people should be the aim and end of all corporation managers. The immense importance of keeping the press thoroughly informed as to the truth in utility matters is pointed out. It is asserted that there is an inherent belief in everybody that where there is fear there is wrong, and thus the repeated statement that a company is keeping something under cover poisons the public mind against the company. It is pointed out that managers must make no move affecting service or rates, or any place of the business which touches the public, without giving due notice and explanation to those who are affected.

980—Public Relations.

HYSTERIA OF CRITICISM. Abstract of an Address by FRANK A. VANDERLIP before the National Association of Cotton Manufacturers, April 29-30, 1914. *Gas Age*, $\frac{3}{4}$ page, May 15, 1914, p. 489.

In this address it is asserted that at present success is marked as proof of wrongdoing, and a saner view of things is advised. It is pointed out that the greater part of government energies, as related to business, are directed toward destructive rather than constructive and creative ends. It is said that it is manifestly unfair that big business should be assailed because it falls below 100 per cent efficiency, while farmers and planters are only 40 per cent efficient. The statement is made that as a nation we have for some years been attacked by a hysteria of criticism against big business, until a majority of people have come to believe that the way to secure prosperity is through legislation, instead of through intelligent hard work, improved methods and a scientific application of the best knowledge of their own business. The particular men who happen for the moment to be occupying official positions in Washington and elsewhere, and who are laying unbearable hardships upon the proper development of business in the United States, are not perhaps primarily to blame. The blame lies back of them in all ill-informed and frequently unfair state of public opinion. We have had a period of magazine and political nuckraking, which has brought

about a condition where business success is looked upon as a crime, where the man who has demonstrated that he can manage his business well is excluded from public counsel and where no small part of our government affairs has been put into the hands of men who would be incompetent successfully to manage modest business affairs. It is idle to rail at the public representatives of one party or another or at one administration or another. We have got to get back of all that and create a sounder, a more intelligent and a more honest public opinion.

149—Holding Companies.

TESTIMONY AND REGULATION OF PUBLIC UTILITY HOLDING COMPANIES. *Electrical World*, 1 $\frac{3}{4}$ pages, May 16, 1914, p. 1086; and *Electric Railway Journal*, 1 $\frac{1}{2}$ pages, May 16, 1914, p. 1098.

The above articles give abstracts of the testimony offered at the hearing on the holding-company feature of the Newlands interstate trade commission bill, held before the interstate commerce committee of the United States Senate at Washington D. C., on May 12. Testimony was presented by Messrs. Bernard Flexner, representing the Middle West Utilities Company of Chicago; Charles K. Beekman, of Beekman, Menken & Griscom, representing the United Gas & Electric Corporation and the American Cities Company, and Stuart G. Gibboney, of Barber, Watson & Gibboney, New York, representing Bertron, Griscom & Company and William P. Bonbright & Company, Inc. The testimony was entirely on the public utility holding company.

910—Promotion and Growth of the Business.

INCREASING THE DAY LOAD, by MINOR Q. WOODWARD and H. E. SMITH. Read before the Arkansas Association of Public Utility Operators, April 21-23, 1914.

This emphasizes the importance of the following factors, when a central station is attempting to increase its day load: (1) the good will of the community served; (2) "electrical use" education of the community; (3) excellent service; (4) co-operation with electrical contractors, architects, etc.; (5) rates; (6) day load lighting; (7) the use of household heating, cooking and labor saving devices; and (8) larger day load business, power, etc. Each of these factors is discussed in detail. The value of the use of electricity in public school domestic science departments is pointed out. It is asserted that this is an unusual opportunity to educate the coming generation in the use of electrical appliances. There is a detailed discussion of ways and means of increasing the power load.

980—Public Relations.

FACTS VERSUS ILLUSIONS, by WILLIAM J. CLARK. *Aera*, 7 pages, May, 1914, p. 1089.

This states that publicity in utility matters is a logical method of combating unfavorable public sentiment, because the prevailing illusions on public utility affairs have thus been created. It is said that, while the desire to give public utility matters "news value" causes far more misstatement of fact than is made with malicious intent, yet the opinions of honest but impracticable theorists, which afford an excuse for making such misstatements, produce practically the same effect upon the public mind as though the source and cause of their origin were less excusable. There is a discussion of municipal and government credit—with view to pointing out that credit and various other basic facts must be carefully considered, before public ownership of utilities is adopted.

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No. 10

RATE RESEARCH



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Rate Research

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Rate Research

Vol. 5

CHICAGO, JUNE 3, 1914

No. 10

For statement of facts and opinions contained in papers abstracted herein, the Association does not hold itself responsible

COMMISSION DECISIONS

WISCONSIN

720—Rate Schedules.

COMPLAINT VS. MONROE ELECTRIC COMPANY, Alleging Unreasonable and Excessive Rates for Electric Service. Decision of the WISCONSIN RAILROAD COMMISSION, Fixing Rates. April 6, 1914.

The service charge for commercial power in the schedule of the Monroe Electric Company, given on page 132 of last week's RATE RESEARCH, should read as follows:

Service Charge.

70 cents net per month per active horse power connected.

COURT DECISIONS

MICHIGAN

112.1—Indeterminate Permits.

PECK ET AL. V. DETROIT UNITED RY. ET AL. Suit Holding That a Resolution Granting the Company an Indeterminate Permit to Make an Extension, is Invalid. Decision of the SUPREME COURT OF MICHIGAN. Holding that the Franchise Is Legal. May 4, 1914. 146 Northwestern 977.

The City of Detroit granted the Company permission to construct an extension known as the Junction Avenue Crosstown Line. The resolution, granting the franchise, provided among other things that the permit could be revoked at the pleasure of the City; and that, in case the City should engage in municipal ownership and operation of the street railways, it should purchase the company's property at a price

EDITORIAL NOTE.—All indented matter is direct quotation.

to be fixed by an arbitration board of three members, one to be appointed by the city, one by the company, and the third by the other two.

The complainants, who are the owners of property abutting on Larchmont Avenue, in the City of Detroit, filed this bill of complaint to restrain the construction of the proposed Junction Avenue Crosstown Line. . . .

It is contended that this resolution is void because it is in conflict with section 29, article 8, of the State Constitution, which provides: "Sec. 29. No franchise or license shall be granted by any municipality of this state for a longer period than thirty years"—and is also in conflict with section 25, article 8, which provides: "Sec. 25. No city or village shall have power to abridge the right of elective franchise, to loan its credit, nor to assess, levy or collect any tax or assessment for other than a public purpose. Nor shall any city or village acquire any public utility or grant any public utility franchise which is not subject to revocation at the will of the city or village, unless such proposition shall have first received the affirmative vote of three-fifths of the electors of such city or village voting thereon at a regular or special municipal election; and upon such proposition, women taxpayers having the qualification of male electors shall be entitled to vote. . . ."

It is the complainants' contention that under Section 29, article 8, of the Constitution, the grant in question is invalid, because it contains no maximum term limit beyond which it cannot run, although the right of revocation is reserved to the grantor. What is the grant in question? The most that can be claimed for it is that it is a revocable right. It is immaterial whether it is termed a grant, license, franchise or permit. Its important feature in this discussion is that whatever it is termed, it is revocable at the will of the city, whenever the public interest requires its termination. By its terms this is to be determined by the common council or the people of the city of Detroit, at their pleasure or caprice. The resolution clearly provides that no term right shall be acquired by the railway company because of the acceptance of the grant by it, and by virtue of the provisions of said section 29, article 8, of the Constitution, which is a clear limitation on the power to grant franchise or licenses, this grant of power could not extend beyond the period of 30 years fixed by the section, even if it should not be revoked by the granting power before the expiration of that time. In the absence of a time limitation in the grant, it must be assumed that it cannot extend beyond the term fixed by the Constitution. *Boise Water Co. v. Boise City*, 230 U. S. 84, 33 Sup. Ct. 997, 57 L. Ed. 1400. Not being a grant for a longer period than 30 years, which is prohibited by the Constitution, and, complying with section 25 of article 8 in that it is "subject to revocation at the will of the city," we are clearly of the opinion that the resolution making the grant was not in violation of any constitutional prohibition.

It is also contended that the council's resolution should be held void because it contains a proviso that, in case the city shall engage in municipal ownership and operation of street railways, and shall desire to operate on the streets mentioned in the resolution, it shall purchase the tracks and equipment therefor at a price to be fixed by agreement or arbitration. This provision cannot be construed to be a limitation upon the power to revoke the permit. This power can be exercised without complying with any conditions. It can be exercised at the will of the common council or the city, and is independent of any other provision. The question of whether or not the city could be compelled to purchase the property and equipment of the railroad as provided for in the resolution, in case the right of revocation is exercised, is a question not involved here.

The decree of the court below dismissing the bill of complaint is affirmed, with costs to defendants.

COMMISSION DECISIONS

INDIANA

224.5—Rates Fixed by Contract.

CITY OF GARY VS. GARY & INTERURBAN RAILWAY COMPANY, Asking that Company be Required to Comply with the Franchise Provision Relating to Carrying Free of Charge Policemen, Firemen and Town Officers. Decision of the INDIANA PUBLIC SERVICE COMMISSION, Requiring the Company to Furnish Such Free Service. May 25, 1913.

The respondent company notified the city that under the Public Utilities Law it could not furnish free service to city agents in accordance with the terms of its franchise, and the city petitioned the commission asking that the company be required to fulfill its contract with the city. The company stated that it was willing to furnish the free service if it can legally comply with the franchise. The Commission considered, first, the question of the right of the city and company to enter into the contract, and the present validity of the contract.

Section 254, of the Towns and Cities Act of 1905, grants the right to any city or town to enter into contracts with public service companies as enumerated, including interurban companies:

Provided, That no such contract shall be entered into by any city or town for furnishing such city or town, or its inhabitants, with water, motive power, heat or light, upon or along the streets of such city or town, for a term longer than twenty-five years.

In regard to the limitation of the term to twenty-five years the Commission says:

In *Hester et al vs. Town of Greenwood et al*, 172 Ind. 279, the Supreme Court of this State held that this section did not prohibit a

town from granting a franchise for more than twenty-five years. When construed with other acts, the evident meaning of Section 254, so far as the term of the franchise is concerned, it is that twenty-five years is fixed as the limit concerning the terms and conditions upon which the franchise is granted, and not to the franchise itself.....

The Commission concludes that Section 13 of the franchise requiring the company to furnish the free service in question is a valid contract.

The company was granted the right to operate and, as a consideration for this grant, had the right to agree to carry persons free of charge as stated in Section 13 of the franchise.

But what the city granted to Gavit (original owner of franchise) was not his own. It acted purely as an agent of its principal, which is the State. In granting the franchise, the town of Gary acted merely as an agent of the State, and the State alone has complete control over the streets of the towns and cities of the State. Whatever the municipality does touching the control and use of the streets and highways of municipalities, is done under the authority delegated to such municipality by the Legislature of the State. In all these transactions, the State is the principal and the municipality or the city is the agent. The real contracting parties engaged in the execution of the franchise set out in the petition were the State upon one hand and the grantee of the franchise upon the other. The only part that the town of Gary had in the transaction was as agent of the State exercising an authority delegated to it by the State. The legislative control of the municipalities of the State is inherent, plenary and conclusive, subject only to constitutional limitations. As the Legislature has the inherent power to create a municipal corporation, so likewise it has the power to destroy such corporation, and has the power to amend its charter, not only in respect to its territory, but also in respect to its powers, privileges and franchises; and this power may be exercised without the consent of the municipality or its inhabitants. The State has the sovereign power that creates the municipality, may alter or dissolve it at pleasure, and may likewise supervise and direct its conduct in all public matters. The State thus acts as general guardian of the person and property of the municipal corporation, and the only limitation upon its supreme legislative power in this particular will be found in the State or Federal Constitution. This power of control and supervision is a necessary corollary of the plenary powers of the State over all public matters and concerns. It is the sovereign, and wherein not restrained by the supreme law of the land, the Legislature, as trustee of the public, for the general weal, has power not only to interpose its arm for protection, but to show its might in positive and affirmative acts of government in particular matters over which it had conferred general charter powers, on the corporation. Governmental powers conferred upon a municipality cannot ripen into vested rights. In its governmental aspect, the corporation is completely subject to the legislative will. The

power which gave, may take away, and may alter, vary or amend at pleasure. It was law which gave all life, power and authority, and the law may diminish or totally withdraw it. It appoints the agent and clothes it with power, and it may limit the power or revoke the agency. Whatever is within the proper scope of legislation, that may be effected in a municipality by the Legislature.

In *Luchrman v. Taxing District*, 2 Lea (Tenn.) 425 (433), the Supreme Court of Tennessee said:

"All the authorities are agreed that municipal corporations are within the absolute control of the Legislature and may be abolished at any time in its discretion. The reason is obvious. Being created as instrumentalities or agencies of the government, they cannot be continued in that capacity whenever the public exigency, of which the Legislature alone is judge, demands that they should cease to act. It is an unsound and even absurd proposition that political power conferred by the Legislature can become a vested right as against the government in any body of men. Municipal grants of franchises are all subject to the control of the legislative power, for the purposes of amendment, modification or entire revocation." *People v. Morris*, 13 Wend. 331.

In *Sloan v. The State*, 8 Blackford 361 (364), the court said:

"Public or municipal corporations are established for the local government of towns or particular districts. The special powers conferred upon them are not vested rights as against the State, but being wholly political, existing only during the will of the general Legislature, there would be numberless petty governments existing within the State and forming a part of it, but independent of the control of the sovereign power. Such powers may at any time be repealed or abrogated by the Legislature, either by a general law operating upon the whole State, or by a special act, altering the powers of the corporation."

In *The State ex rel. City of Terre Haute v. Kolsen et al.* 130 Ind. 434 (437), the court said:

"A municipal corporation is not clothed with any vested right in a public office, nor indeed does it possess a vested right in public property. It has long been and firmly settled that the charters of public corporations may be repealed or altered, as the Legislature, in the exercise of its constitutional powers, deems proper."

In *Williams v. Egglestone*, 170 U. S. 308, the court said:

"Neither can it be doubted that if the State Constitution does not prohibit, the Legislature (speaking generally) may create a new taxing district, determine what territory shall belong to such district, and what shall be considered as benefited by the proposed improvement, and in so doing it is not compelled to give notice to the parties resident within the territory, or permit a hearing before itself, one of its

committees, or any other tribunal, as to the question whether the property so included within the taxing district is in fact benefited. The only question is as to the power of the Legislature to cast the burden of the improvement upon the five towns which have already been judicially determined to be towns benefited thereby. In casting this burden upon the towns, the Legislature did not proceed without a hearing for the towns, for their representatives were in the Legislature and took part in the proceedings by which the act was passed."

112.1—Indeterminate Permits.

It would appear to be the law, that in all matters touching the granting of franchises, the power of the Legislature to change, alter or rescind the franchises, so far as the city itself is concerned, is full, complete and perfect. It is simply the power of the principal over its agent. As the franchise was granted by the city, acting as an agent only, the city has no right in the franchise, except as it represents the right of its principal. If the principal, at any time, for any reason satisfactory to itself, chooses to withdraw from the contract, abandon its rights or forego its benefits, the city granting the franchise has no right to be heard, and its contentions can in nowise prevail as against the State. The Legislature being the supreme guardian, the principal in the transaction, has absolute and full control of the entire matter, and can do as it elects to do, even over the protest and objection of its agent, the city. In this particular instance, the State has the right by its Legislature to say that all the benefits and advantages that accrued to the city as the agent of the State may be abandoned. If it chooses to say that and does say it, the city of Gary is helpless, and its protests and objections can avail nothing. This is the full philosophy and theory of the indeterminate permit mentioned in the Shively-Spencer Utility Commission Act.....

By virtue of the provisions of this section, (Sec. 101) the State exercises its inherent and sovereign right to pass directly over the head of its agent, and to deal with the other contracting party, the utility, and to say to such utility, even over the protest and objection of its agent, the municipality, that if such utility will surrender its franchise and submit itself to the just regulation of this Commission, that the State will forego all the advantages and benefits it has received under the franchise. Now, what right has the city to object if the principal chooses to forego its advantages; of what avail is the opposition of the agent. The answer is, none. The power to offer to the utility the option of surrendering its franchise and its benefits and advantages, and accepting the indeterminate permit, is clear in the light of the foregoing authorities. and the foregoing reasoning. It is a just exercise of a lawful power on the part of the State. The only other question involved in this controversy is, Has the State by any act of its Legislature since the granting of the franchise herein involved enacted any law by which it agrees to surrender any advantages it has obtained under such franchise. We maintain, that it has not.

It has offered in Section 101, and other sections touching the indeterminate permit, the option to the Gary and Interurban Railway Company of surrendering its franchise and submitting itself to the regulation of this Commission, and, in consideration of its so doing, to relieve such company of the liabilities and burdens imposed upon it by this franchise. So far, the railway company has declined to avail itself of this opportunity;

650—Discrimination.

but it is insisted that the provisions of the Shiveley-Spencer Utility Commission Act, touching discrimination in the sales of service, has rendered it unlawful for the railway company to longer comply with the provisions of this franchise. This position cannot be maintained.

It is pointed out that under Section 114 of the Utility Act the furnishing of free service such as that provided for in the company's franchise, is not prohibited by anything contained in this act. In conclusion the Commission says:

The purpose of the indeterminate permit was to relieve street railways and other utility companies from certain burdens arising out of their franchise, but it was not the policy of the law, nor the purpose of the Legislature to relieve the holders of such franchises from the burdens legally assumed, unless they would consent to take an indeterminate permit.

The company is ordered to furnish the service complying with the terms of the franchise.

NEW BRUNSWICK

300—Investment and Return.

Application of THE EASTERN ELECTRIC AND DEVELOPMENT COMPANY, Asking for Authority to Increase Rates. Decision of the NEW BRUNSWICK BOARD OF COMMISSIONERS OF PUBLIC UTILITIES, Dismissing the Application. April 22, 1914.

The Board found the testimony and the evidence submitted in the case inadequate for a determination of a proper basis for rate making and the application was dismissed without prejudice to the filing of another application if the company is in a position to furnish other evidence as to the actual cost or value of the plant or if, after further operation under the present schedule, it can be shown that the rates are plainly inadequate.

311.2—Reproduction Cost New.

In discussing the two appraisals submitted in this case, the Board says:

Both are made up by taking the present replacement cost and deducting certain percentages for depreciation. We are by no means

satisfied with the replacement cost as a trustworthy guide. It is a difficult standard to apply, even when there has been no marked difference in construction cost, between the time or times when the plant was installed and the time when the estimate of replacement cost was made.

Before the advance in cost of labor and materials replacement cost was usually less than the actual cost of building up a plant, principally because it would be cheaper to install a complete equipment under one contract than it actually was to build it up piecemeal, and then it was common for consumers and the public generally to insist that the replacement cost was the only proper basis for rate making; but in many cases this would work manifest injustice to those public utility companies which had expended their money prudently and wisely and as occasion required to meet all reasonable calls for service, thereby necessarily expending more than if they had put in the whole equipment at once. We think that if that standard had been rigidly followed, it would have driven public utility corporations to erect plants far in advance of their requirements, and to have invested large amounts of capital in plant which must have lain idle, and would have deteriorated without being in a position to earn money. The public would certainly have objected to rates which would have enabled a company to earn a reasonable return upon such premature development, so that either way the public utility company would have been likely to suffer an injustice.

But now conditions are changed; owing to the greatly increased construction cost, the replacement value instead of being less is more than the amounts actually expended in establishing plants (except, of course, those built up very recently), and now the public utility companies insist that the present replacement cost with a reasonable allowance for depreciation should be the basis upon which rates should be fixed while the consumers object.

We have thought it well to state at some length the opinion of the Board as to replacement cost as a standard. In our view it is not only a difficult one to apply, as was said above, but owing to the fluctuations in cost above referred to, it is not only a difficult but an uncertain standard. For these reasons we do not look upon either of these appraisals as particularly useful in assisting the Board to arrive at a just conclusion as to the present value or actual cost of this plant. . . .

REFERENCES

RATES

530—Discounts.

PREMIUMS AS DISCOUNT. Editorial, *Journal of Electricity, Power and Gas*, May 23, 1914, p. 453.

This comments on a suggestion recently made in one of the magazines, that premiums—coupons redeemable in merchandise—be given in place of discounts, as a means of boosting the demand. It is said that this suggestion shows that those advocating this procedure do not fully grasp the situation, and further emphasizes the necessity for specialization in public utility publicity. The reasons underlying the use of discounts in electric rates are given.

623—Power Factor.

PHASE ADVANCERS, by L. F. ADAMS. *General Electric Review*, 5 $\frac{3}{4}$ pages, June, 1914, p. 583.

This article introduces the subject of phase advancers by a statement of the need of the device and a very brief history of its development. Next is described the construction of the phase advancer, the connections employed in its application and its operation under different conditions. Some numerical examples are then given to show the benefit that is to be derived from the installation of one of these machines, and curves are included which show the effect that these devices have upon the characteristics of the induction motors to which they are connected. The remainder of the article is devoted to a discussion of the commercial views that have been taken of these power-factor improving machines.

740—Company Data.

TRADE AND INDUSTRIES OF PROVINCE OF ULSTER, by Consul HUNTER SHARP, Belfast, Ireland. *Daily Consular and Trade Reports*, 25 pages, June 1, 1914, p. 1185.

On page 1189 of this article information concerning the electric supply of the city of Belfast, is given. Electric current is supplied for lighting purposes at a flat rate of 3 $\frac{1}{2}$ d. (7 cents) per unit, and for lighting private residences at a flat rate of 3d. (6 cents) per unit. There is, however, an alternative rate on the maximum-demand system. For heating and power purposes the rate is graded on the maximum-demand system from 2 $\frac{1}{2}$ d. to 1 $\frac{1}{2}$ d. (4 $\frac{1}{2}$ to 2 $\frac{1}{2}$ cents) per unit, according to the quantity used. The average price per unit obtained in the fiscal year ended March 31, 1913, was 2.18d. (5.62 cents) for lighting, 1.224d. (2.448 cents) for power, and 0.589d. (1.178 cents) for tramway supply. The limit of capacity of the present generating station has been reached, there being no room for the installation of more machinery. To meet the increasing demand, the city council has decided to erect a new plant, and negotiations for a site are now in progress. The initial expenditure for this plant will be about \$413,700.

410—Cost of Service.

FACTORS ENTERING INTO THE COST OF A KILOWATT HOUR, by H. L. WALLAU. Read before the Detroit-Ann Arbor Section, A. I. E. E., May 8, 1914.

This is an analysis of the factors entering into the cost of electric "service" in contra-distinction to the cost of mere "kilowatt-hours." There is a discussion of investment expenses, tangible and intangible, and of the various causes for the increase of investment in the sale of electric "service" as distinguished from

"kilowatt-hours,"—the need of a plant capacity of such magnitude that the load can be safely carried with the largest unit down, etc. The effects of power factor in increasing investment and increasing losses, are pointed out. The statement is made that the consumer must pay the fixed charges on such of the items as enter into his cost of service—interest on the money invested and on the working capital, depreciation charges, and allowance for obsolescence, et cetera. These charges go on irrespective of whether he uses current or not and this fact accounts for the Wright and Hopkinson rate systems. Further, there are charges against him individually as soon as he is connected. A specific investment is made on his premises, he is entered in the consumers' ledger, a record of his installation is made, his meter must be read monthly and his bills sent out. All this constitutes what is known as a customer's charge and gave rise to the modification of the Hopkinson rate system known as the Doherty system. Reference is also made to the expense involved in inspection, testing, maintenance of equipment, engineering advice, taxes, information departments, trouble departments, etc.

INVESTMENT AND RETURN

310—Valuation.

ORIGINAL COST AS A FACTOR IN REGULATION OF GAS AND ELECTRIC UTILITIES, by A. P. WATSON. Read before the Oklahoma Gas, Electric & Street Railway Association, Oklahoma City, Oklahoma, May 13-15, 1914. $7\frac{1}{2}$ pages.

This is a discussion by Corporation Commissioner Watson, of the Oklahoma Commission, of Order No. 774, requiring the gas and electric utilities of the state to make and file with the Commission a valuation of their properties. There is an outline of the circumstances leading up to passing of Chapter 93 of the Laws of 1913, whereby the Commission was given jurisdiction over gas and electric utilities. With regard to Order No. 774, it is said that if like conclusions are to be reached in the case of like services, furnished at like expense and involving the use of a like investment, it is necessary that they be reached by the application of like formulae. If equally fair conclusions are to be reached where service is not identical, where expense is not the same and investment involves such dissimilarities that there is little or no basis for comparison of one property with another, it is essential that such conclusions be arrived at by following a uniform classification of property and accounts. It is such uniform classification of property and accounts, with specific requirements to govern the report of original costs, that Order No. 774 assumes to provide and prescribe. It is said that the purpose in the mind of the Commission in the promulgation of this order was not alone the establishing of a basis for reduction of rates where rates are too high but equally the protection of the utility against unjust demands for reduction in rates. The statement is made that it is the wish and the purpose of the Corporation Commission to assist in the operation of all utilities by removing causes of friction and of injustice and substituting therefor a harmonious relationship between the utility and the public and an adjustment of differences on a basis of fairness and justice.

PUBLIC SERVICE REGULATION

200—Public Service Regulation.

COMMISSION EFFICIENCY IN PUBLIC SERVICE, by JAMES BLAINE WALKER. *The Annalist*, $\frac{2}{3}$ page, May 11, 1914, p. 590.

This notes the important economies which have been effected in operation and administration of utilities by the work of the New York Commission for the First District.

200—Public Service Regulation.

LIST OF REFERENCES ON FEDERAL CONTROL OF COMMERCE AND CORPORATIONS. Pamphlet, 104 pages. For sale by the Superintendent of Documents, Government Printing Office. Price, 15 cents.

This is devoted to various special aspects of the subject of Federal control of commerce and corporations; to the ways, for example, in which Federal control is to be exercised, by Federal incorporation or licensing, by Federal taxation, by the regulation of capitalization, by the supervision of accounts, etc.; and to the means by which Federal control is to be accomplished through the Interstate Commerce Commission, the Commerce court, or other such agency. References are also given on the application of Federal control to railroads, express companies, the telegraph and telephone, etc., to interstate liquor shipments, to bills of lading, and to industrial combinations or trusts; and finally, to the more important litigation which has contributed to the development of the subject of Federal control of commerce and corporations. A full analytical index discloses the more minute ramifications of the subject.

132—Competition.

DECISION OF THE PUBLIC SERVICE COMMISSION OF THE COMMONWEALTH OF PENNSYLVANIA REGARDING COMPETITION. Pamphlet, 12 pages.

This pamphlet, published by the J. G. White Management Corporation, contains a reprint of the Schuylkill Light, Heat and Power Company case (see 5 RATE RESEARCH 67). The introduction states that the most important points in the decision are: First.—The adoption of the principle that if communities permit competing plants to be installed, it follows from experience that such plants are eventually merged, and then such communities and their citizens are in duty bound to pay such rates as will give a sufficient and proper return on the duplicated investments. Second.—That companies giving adequate service at reasonable rates should be protected against competition and that the remedy for inadequate service and excessive rates should be by regulation rather than by competition.

MUNICIPALITIES**830—Public Ownership.**

WILL GOVERNMENT REGULATION SUCCEED? by S. O. DUNN. Read before the Transportation Club of Indianapolis, May 5, 1914.

This states that unregulated private management would give better results from all points of view than government management. It is said that initiative and enterprise constitute the great merit of private management; and it is the lack of them which constitutes the great defect of public management. And this one demerit of public management is more than an offset to all the shortcomings and offenses of unregulated private management. It is pointed out that the public believes that the only alternatives are either successful public regulation or public ownership. Therefore all who believe in the advantages of private ownership and management should be anxious to see a policy of regulation worked out and adopted which will succeed. There is an analysis of the menaces to regulation by commission, and of the powers which such commissions should have. It is said that the enemies of just and enlightened regulation—the railway financier who holds up his fellow stockholders and the public, the big shipper who practices piracy on both the railway and the little shipper, the railway official who does not know how to get on with the public, the railway official who grafts, the demagogue who furthers his political ambitions by hurling unjust

invectives and cooked-up statistics at the railways, the railway commissioner who discloses his own character and prostitutes his office by constantly appearing as the prosecuting attorney instead of acting as a just judge, and the numerous people of socialistic temperament and ideas who cannot conceive of any good coming out of a large corporation—these we will have always with us to defeat many efforts to put and keep regulation on a fair and sound basis.

840—Public Operation.

EFFICIENCY UNDER MUNICIPAL AND PRIVATE OWNERSHIP. *Electrical Review*, $\frac{1}{2}$ page, May 30, 1914, p. 1089.

This comments on an article by F. O. March, recently published in the FINANCIAL WORLD, showing the greater efficiency of the management of public utility properties by private operators as contrasted with the management of similar properties by municipal administrators, by reference to data recently compiled by the Bureau of the Census. It is said that it is significant that from the data given out by the Government, no direct comparison between privately owned and publicly owned electric central stations is possible. But a careful analysis of the statements published by the Census Bureau brings out very clearly the difference in cost of operation between the two classes of administration. From the tables of statistics it will be noted that in 1912 the rate paid by the public for municipally produced electricity was 4.31 cents per kilowatt-hour whereas the gross income of privately owned plants in the same year was but 2.54 cents. In other words the cost to the public was \$1.70 in 1912 to obtain the same amount of electricity as was furnished by private plants for \$1.00. A comparison of the operating expenses is just as startling. The operating expenses of municipal plants per kilowatt-hour were 3.14 cents, while for private plants it was 1.98 cents. Although the privilege of having a municipal lighting plant costs the average citizen nearly 70 per cent more than he would have paid if he had purchased his electricity from a privately owned plant, the municipal plant ate up in operating expenses nearly all of the extra amount which it exacted from him. Has the administration of the municipal plants been applied to the privately operated plant with receipts of but 2.54 cents, these plants would have been operated in 1912 at an actual loss which would have amounted to 0.6 cent. The actual load factor of the privately operated plant in the United States for 1912 was 25.6 per cent. The load-factor of the municipally operated plant was but 16.6 per cent.

840—Municipal Operation.

SANITARY DISTRICT ELECTRIC CURRENT PRICE TO CITY, by GEORGE W. WEBER. *Weber's Weekly*, 4 pages, May 30, 1914.

This article points out that the rate charged in the city of Chicago for electric energy for street lighting is less than it costs to generate, transmit and distribute it and, that the sanitary district has not—and is not likely soon, if ever, to have enough waterpower to meet the city's requirements for electric current. In conclusion it is said that the sanitary district should charge for its electrical current at least "actual net cost" and, if it does not do so it can be compelled, in the courts, to make such charge. It is asserted that the municipal government of Chicago should pay the value of that which it gets. At present the cost of the sanitary district's electrical current is greatly enhanced by the fact that it is unable to sell all its current all the time. That condition should be remedied, by selling its current, en bloc.

830—Public Ownership.

HEARING ON PUBLIC OWNERSHIP OF STREET RAILWAYS IN WASHINGTON. Article and Editorials, *Electric Railway Journal*, 13 pages, May 30, 1914, p. 1193, 1183, 1184.

This gives a report of the testimony given at the hearings of May 22, 26 and 27, on the Crosser Bill, providing for public ownership of the electric railways in the District of Columbia. The speakers were General George H. Harries, Clarke

M. Rosecrantz, William J. Clark, F. C. Hendershott and Frederick Nicholas. The editorials trace the history of the bill, point out that the question is of national importance, and that it is not the result of any movement on the part of the city itself.

The pending measure is of vastly greater significance than any similar measure affecting another city. What is done in Washington may be considered as representing the national policy. The bill proposes legislation radically different from the present settled policies of the country. It proposes public ownership by vote of Congress in a district where the residents have no voice to decide whether or not the innovation shall be introduced. It proposes legislation in the conspicuous capital of the country on a subject that is primarily a function of state or municipal government. Such a step might be of far reaching effect. For some years following the exhaustive report on municipal ownership published by the National Civic Federation in 1907, little was heard in this country about the municipal ownership of electric railways. The agitation in Washington does not come from the public but is an exotic brought in by a few congressmen, who have no property interest at stake in the District and who wish to exploit their ideas at the expense of the taxpayers.

GENERAL

910—Promotion and Growth of Business.

ELECTRICAL SUPPLY IN GREATER LONDON, by Commercial Agent ERWIN W. THOMPSON. *Daily Consular and Trade Reports*, 2½ pages, May 26, 1914, p. 1105.

This describes the electrical supply situation in London at the present time, and discusses very fully the proposals made in the Merz-McLellan report (see 5 RATE RESEARCH 111, 128).

980—Public Relations.

DUTY OF THE N. E. L. A. TO THE PUBLIC. Editorial, *Electrical World*, May 30, 1914, p. 1197.

This comments on the great prominence now given to the question of the relations of the public and public utilities. It is said that the solution of the difficulties is to be found in the operation of the utilities by private companies under strict regulation by public service commissions. What many managers have overlooked is the urgent necessity for having the facts involved properly presented to the public rather than given forth in distorted form by the agitators, politicians and interested legislators. In no way could the National Electric Light Association render better service to the country than by keeping the public fully informed concerning the proper conduct of the electric energy supply business under suitable public service commission control. Constructive suggestions to the public and the commissions should be the order of the day in the central-station business rather than counter attacks against ignorant agitators, unsafe politicians and unenlightened legislators.

980—Public Relations.

CORPORATION BAITING AND MISREPRESENTATION. Editorial, *Electric Railway Journal*, May 30, 1914, p. 1184.

This points out that if the exploitation only of the misfortunes and mistakes of the electric railways was the extent of the misrepresentation to which they are subject, they could often afford to be silent where now it is their duty to speak. But in many cases the misrepresentation extends to the publication of statements which are so erroneous as seriously to prejudice the case of the companies with the public. These statements may sometimes be made intentionally, but it seems that in most cases they are due to carelessness or ignorance of the real

condition on the part of the speakers or daily papers, often accompanied by no great effort to learn the facts. One reason for this is that the habit of corporation baiting for political advantage, unfortunately, has become one of the established customs of the country, and the fact that an electric railroad comes in contact with an enormous number of people under circumstances which are likely to create causes of dissatisfaction makes the corporation an easy mark for the unprincipled politician or newspaper who wishes to gain a cheap notoriety. Corporation baiting as a favorite sport of legislators and newspapers will go out of fashion when, and only when, they generally recognize that it is not popular with the public, and it will cease being popular with the public when the case for the railroads is understood.

980—Public Relations.

PUBLICITY FOR ELECTRIC RAILWAYS, by W. T. BUCHANAN. *Electric Railway Journal*, Article and Editorial, 2½ pages, May 30, 1914, p. 1209 and p. 1183.

This states that almost universally—in the cities where advertising campaigns have been conducted against a proposed restrictive measure—the result has been a failure. There is a discussion of different kinds of publicity service. The statement is made that the problem of public relations is a local one; and that the best method of avoiding trouble is to see that every difficulty as it arises, is immediately adjusted before it has a chance to secure sufficient momentum to be dangerous. It is stated that in the public utility field to present direct arguments, simply opens up the way for a public discussion and a chance for the politician to come in with his usual tirade.

COURT DECISION REFERENCES.

243.6—Penalties.

HALL ET AL. V. PHILADELPHIA Co. Decision of the SUPREME COURT OF APPEALS OF WEST VIRGINIA. April 21, 1914. 81 Southeastern 727.

The Philadelphia Company was under contract with a customer and his wife, by the terms of an oil and gas lease, to furnish them free gas for domestic use from a producing gas well drilled on their land under the lease. By a connection which they had made with the well, the customers were using the gas in their dwelling, depending on it for light and fuel. They were also burning the gas at one place outside the dwelling, to light the way to other buildings. The company, claiming that the outside light was not domestic use, notified Hall and his wife to extinguish it. Because they would not do so, the company, during zero weather in December, cut the connection at the well and left them wholly without light or heat in the dwelling for the period of thirty-six hours. Hall and his wife brought suit against the company, and the jury returned a verdict in their favor for five hundred dollars. At the suggestion of the court, the plaintiffs in the action remitted one-half of the amount and took judgment for two hundred and fifty dollars. The defendant company by this writ of error says the judgment is unfounded and should be reversed. . . .

The court holds that while the plaintiffs are entitled to recover such actual compensatory damages as they may be able to prove on a new trial, the damages awarded at the previous trial were excessive; and that the claim of right by the plaintiffs to burn the outside light did not warrant the company's discontinuing the service, since the company had remedy without breaching contract.

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Rate Research

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CHICAGO, JUNE 10, 1914

No. 11

For statement of facts and opinions contained in papers abstracted herein, the Association does not hold itself responsible

COMMISSION DECISIONS

WISCONSIN

132—Protection from Competition.

Investigation of an Alleged Violation of Law by the LISBON TELEPHONE COMPANY. Decision of the WISCONSIN RAILROAD COMMISSION, Finding that an Extension of Line was made Without Proper Authority and that Duplication of Telephone Service is Unnecessary. March, 1914.

The line in question had been constructed prior to this investigation, but, in the absence of any indication of willful violation of the law, the Commission proceeded first to determine whether public convenience and necessity required the building of such a line as though the matter were properly before the Commission in the manner contemplated by the statute.

Complaint was made that the service, rendered by the Company operating in the territory to which the illegal extension was made, is inadequate. The Commission says:

In any case, it would seem that whatever defects there may be in the service should be taken care of in the regular course provided by law [by proper investigation upon formal complaint to the Commission] unless they are so glaring or so impossible of correction that the usual measures for forcing adequate service will not prove effective. The building of a duplicate line in such a way as to cover territory already fully covered by an existing company is not easily justified, and certainly the amount of deficiency in service which has been disclosed by the testimony in this case is not sufficient to warrant the drastic remedy of duplication in advance of any attempt to correct the service in the more usual way.....

In conclusion, the Commission says:

It appears to us that this is a case in which if the Lisbon Telephone Company had filed its notice with the Commission in the manner required by law, the Commission would have found that public convenience and necessity do not require the proposed extension. The

company would not therefore have been legally entitled to proceed with the extension. The company should not of course be entitled to any greater privilege because it went ahead in violation of law than it would have had had it proceeded in conformity with the law. Chapter 610 of the Laws of 1913 prescribed a specific procedure to be followed in the case of telephone extensions, and makes no provision for a case like the present, where the extension is made in violation of the statute. It does not appear therefore that we have authority to make an order requiring the Lisbon Telephone Company to remove its line, to discontinue giving service to Mr. Namerow, and to refrain from installing service in the residence of Mr. Stiehl. The same result will probably be reached, however, by our statement that public convenience and necessity do not require the extension and that it exists in violation of law. Therefore, unless the Lisbon Telephone Company discontinues service to Mr. Namerow and refrains from serving Mr. Stiehl, the way will be open for a prosecution.

NEW YORK (1st D.)

224.2—Contracts.

INVESTIGATION CONCERNING RATE SCHEDULES OF ELECTRICAL CORPORATIONS AND THE FILING OF SPECIAL CONTRACTS. Decision of the NEW YORK PUBLIC SERVICE COMMISSION (1st D.), Requiring Publications of All Rates and Contract Provisions. February 16, 1909.

(This decision was inadvertently omitted from its chronological order and has just been published in pamphlet form.)

The former order, reported in 1 P. S. C. R. (1st Dist. N. Y.) 377, provided for the publicity of all rates, contracts, rules and regulations of electrical corporations. A rehearing of the matter was held upon objection offered by the New York Edison Company, the United Electric Light & Power Company and the Edison Electric Illuminating Company of Brooklyn.

The principal objection that was made to this order in the informal conferences which preceded the application for the rehearing was that it would not allow the companies leeway upon "minor service matters." The companies stated that a consumer now and then insists that there shall be inserted in his contract an agreement upon the part of the company to read his meter weekly or upon the first of every month, to render duplicate bills, to supply the most efficient type of lamps, to provide service connections at specific points, to locate the meter in a selected place, or to perform some other similar service. To the suggestion that these matters be omitted entirely from contracts, the three companies replied that they would gladly do so but that the consumer would not accept a verbal promise but insisted that it be put in writing and made a part of the contract. It was also suggested that the corporations standardize these clauses,

make them public and insert them in all contracts. To this the companies replied that if every consumer were to demand any one of these provisions, it would be impossible to grant their requests, it being impracticable for any corporation to attempt to read the meters of all consumers upon the first of each month, for example. They also stated that even if all consumers did not demand a certain provision, so many would insist upon having it if it were thrown open to all, that it would be impossible to comply, as many would insist who really would not find it of any special value.

On the other hand, the Commission points out that if the company is allowed, at its own discretion, to insert in any contract a clause relating to "minor service conditions," the way will again be open to granting special privileges of which the Commission will have no record.

In an effort to allow more discretion without throwing the door wide open, it was suggested that some such clauses as the following ought to be acceptable to the companies and would doubtless safeguard every right of the public. As amended, Paragraph (f) of Section 4 . . . would read:

(f) An exact copy of every form of contract and schedule of rates, each to be followed by an exact copy of every form of rider applicable thereto; *but any corporation may insert at its discretion in any contract a standard clause relating to any minor service condition, provided such standard clause shall first have been submitted by the said corporation to and approved by the Commission.* . . .

The only objection urged to such a plan is that it would interfere with the freedom of the corporation, and that even a brief delay might result in the loss of a large contract. As to the former, every corporation which performs a public service must, because of the nature of its business, submit to certain regulations which are not applicable to private corporations. Publicity of all rates, charges and service conditions is one of these, and equality of treatment is another. . . .

But it should be clearly understood that the order in no way limits the right to make contracts, provided every person in a class is given the same rate and offered the same service, and provided the exact form of contract shall have been published so that every consumer may know what rates and service he may have as well as some favored consumer. The statement, therefore, that the publicity order makes it "impossible for the company to obtain certain important classes of business" and precludes the "company from making any change in any form of contract" is inaccurate. The order does not prescribe directly or indirectly what a contract shall contain. Any company may make a rate as low as it pleases, give all the privileges it desires to give, and amend, extend and change in any way the forms of contract ad libitum. But it must treat every individual in a class alike and it must publish its forms of contract so that all may see them.

COURT DECISIONS**LONDON, ENGLAND****600—Rate Differentials.**

ATTORNEY-GENERAL (ex rel. LONG EATON GAS CO.) v. LONG EATON URBAN DISTRICT COUNCIL. Suit to Restrain the Long Eaton Urban District Council from Making a Lower Charge to Customers Taking Their Power and Light Exclusively from the Council, Than to Customers Taking Power Only or Power and Partial Lighting. May 12, 1914. *The Electrician* (London), May 15, 1914, p. 236.

Mr. Justice Sargant delivered his reserved judgment in this action on Tuesday. He said plaintiff sought to restrain an alleged breach by the Council of the provisions of Secs. 19 and 20 of the Electric Lighting Act, 1882. The Council were the undertakers under the Long Eaton Electric Lighting Order, 1900, and in that capacity had the powers and were subject to the obligations within their area which were given and imposed by that Order and the Electric Lighting Acts of 1882 and 1888. . . .

In the area of supply of the Council the staple industry was the production of machine made or Nottingham lace, and the electrical energy supplied by the Council was used not only for public and private lighting, but also for supplying the power to drive various machines employed in that industry. Indeed, it was for the latter purpose that the main part of the energy sold was employed. In the year 1913, while the total number of units sold to private consumers by meter was 1,363,181, and the total number sold to those consumers and for public lighting was 1,499,345, there were sold for power alone to the 15 consumers of energy in the district who took over 6,000 units per quarter each, an aggregate of 966,036 units, which was over 70 per cent of the former figure and between 64 and 65 per cent of the latter figure. The electrical undertaking of the Council was a comparatively small one. The capacity of the station was 950 kw. and the maximum demand actually made at any one time during 1913 was 658 kw., and of that maximum demand about 308 kw. appeared to have been made for power, leaving about 350 kw. as the maximum demand for light. The load factor was 26.01 per cent., which was admittedly an exceptionally favourable figure, and was no doubt due not only to the large proportion of the electric supply taken for power (the demand for which was usually longer and more even throughout the year than that for light), but to the exceptionally long hours for which the mills in the district were worked. Some works use electrical energy for both lighting and power, others use gas for both purposes; some use electricity for power and gas for lighting, and others use gas for power and electricity for lighting.

720—Rate Schedules.

The undertaking had been a successful one, and it had been possible not only to earn profits but to lower the rates charged for energy. For lighting houses, shops and other premises (except factories) there was a flat rate of $3\frac{1}{2}$ d. [7 cents] per unit, less ten per cent; for lighting factories, 3d. [6 cents] per unit for the first 2,000 units per quarter, afterwards 2d. [4 cents] per unit, less in each case certain discounts increasing with the amount of the account; and for power or heating, for a consumption not exceeding 250 units per quarter, 2d. [4 cents] per unit, and for larger consumptions per quarter a gradually decreasing charge per unit, until for a consumption between 4,000 and 6,000 units per quarter the rate was 1d. [2 cents] per unit, and for a consumption exceeding 6,000 units per quarter $\frac{3}{4}$ d. [$1\frac{1}{2}$ cents] per unit. He need hardly add that the difference in the rates of charge for lighting and power respectively involved that if a consumer desired a supply for power as well as a supply for light, he must have a separate circuit for the supply for each purpose. The present proceedings arose out of a circular (issued by the Council on Sept. 25, 1911) stating that "the present scale of charges remain in force where power and lighting are both taken exclusively from the Council's electricity mains, but in cases where electricity supply is taken for power only or for power and partial lighting the lowest scale of charges, where the number of units consumed during any quarter exceeds 4,000, shall be 1d. [2 cents] per unit, and otherwise according to existing scale.

600—Rate Differentials.

It was alleged that the differentiation expressed in the circular between those large consumers of power who took power and lighting exclusively from the Council's mains and those large consumers who took current for power only or for power and only partial lighting was a breach of Secs. 19 and 20 of the Electric Lighting Act, 1882. The matter had been argued before him entirely on the differentiation between the consumer A, who took power exclusively and light exclusively from defendants and a consumer B, who took power exclusively from defendants, and took either no light or only some of his light from defendants. . . .

Having quoted the terms of Secs. 19 and 20 of the 1882 Act he said it was alleged by plaintiff that both sections had been infringed. Sec. 19 because the supply of electricity to B for power was a supply corresponding with the supply to A for power and was applied for and given under similar circumstances. Sec. 20 because the lower charge to A was undue preference. . . . Under each section he thought that the whole circumstances might be considered from the broadest possible point of view, and that the question was whether the circumstances affecting consumer A or consumer B in relation to their supply of power were substantially dissimilar or sufficiently dissimilar to broadly justify the differentiation proposed by the circular.

It would seem that A must not be charged less than B, merely to overcome a greater reluctance on the part of A, to become a customer, or to induce A to become a customer in respect of another supply, although either of these reasons might be a good commercial reason for charging less to A were the public undertakers merely carrying on any ordinary commercial business. On the other hand, any circumstances which rendered it less costly, or otherwise more profitable to supply A than B constituted a legitimate reason for making a lower charge to A for the same supply. And if the Court came to the conclusion that some such circumstances existed, then proof would not be required that the diminution in the charge was precisely equivalent to the diminution in the cost of the supply. To apply these principles to the present case if as alleged by the relators the object and result of the circular were to coax or induce those who took power only or power and partial lighting to take the whole of their lighting from the Council, and the extra custom thus obtained would not *per se* make the rendering of the existing service more costly or more profitable to the Council, then the policy of the circular would be wrong, and the differentiation between A and B would be illegal. But if on the other hand the combination of lighting or exclusive lighting would make the supply of power or of power and partial lighting to the customer in question less costly or more profitable, then there would be a justification for reducing the charge to A as compared with B or for increasing the charge to B compared with the charge to A. He understood the contest really resolved itself into one of fact, namely, whether as between customer A, who took power and light exclusively from the Council and customer B who took power exclusively but either no light or only part of his light, the taking by A of an exclusive supply of light rendered it cheaper or more profitable to the Council to give a supply of power to B. The onus of establishing that would appear to rest on the Council. Speaking generally the technical and other evidence by which they sought to prove their case seemed to him extremely thin. On the other hand, no technical evidence was called by plaintiff. The only evidence in justification of the preference to customer A that had to be seriously considered was that of Mr. Snell, and a good deal of that evidence might be dealt with very briefly.

621.1—Load Factor.

The only part of Mr. Snell's evidence which struck him as really relevant or important was that in which he attempted to show that under the special conditions of Long Eaton the supply of energy for lighting factories was in a sense supplementary to the supply of energy for power and improved the load factor by providing a demand at a time when defendants' machinery would otherwise be idle. Mr. Snell had to acknowledge that as the load factor for light was much worse than that for power a customer for both power and light had in a general a worse load factor than a customer for power only. For inasmuch as he took his maximum load for power his total load

factor was a mean between the worse load factor for light and the better load factor for power, though the lower load factor for light might, and should if the relative prices for light and power were fair, be compensated for by the higher price per unit charged for light. But he said that inasmuch as at Long Eaton some 20 per cent of the power load (that attributable to the winding machinery) was not working before 7 a. m. or after 7 p. m., the factory owner who took light as well as power gave during the summer months of the year an opportunity to that portion of the machinery at the central station which might be regarded as installed against the winding machine load of being used for the production of light during the whole or some of the hours between 7 p. m. and midnight, and the whole or some of the hours between 4 a. m. and daylight, or in times of great activity between midnight and daylight. And the result (said Mr. Snell) was that the load factor of such a consumer (consumer A) was improved and that he was in truth a better customer—a customer who could be supplied more cheaply—than customer B. That would no doubt be quite true if no more machinery had to be installed to supply customer A than customer B, or if, what was much the same thing, load factor could properly be calculated with reference to the maximum demand or load during the summer months of the year, and not with reference to the maximum load throughout the whole of the year. But in the fact the contrary was the case. The demand for electric lighting was, of course, a demand that varied seasonally, and the demand or load that really mattered, and against which power had to be installed, was that during the winter or dark months. Further, there was nothing whatever to prevent the period of the maximum or peak load for power, and indeed, so far as the factories alone were concerned, there was a good deal to make the two synchronise. And accordingly it was quite clear that the typical consumer A when compared with the typical consumer B must be considered as necessitating the installation in the central station—not merely of machinery sufficient to satisfy his demand for power, but also of extra machinery to satisfy his demand for light. If that be so it was difficult to see on what principle the machinery used to supply power to the winding machinery run by female labour could be considered as being profitably employed in supplying light to those parts of the factory which were run by male labour. For, *ex hypothesi*, other machinery had already to be installed for supplying light not merely to the principal part of the factory where the male labour went on working, but also to that portion of the factory where the female labour was employed, and where the supply of light was not required for any longer hours than the supply of power. In the absence of anything like definite information on that point from the Council he could not look on that supposed advantage with regard to overhaul as any real justification for the differentiation between consumer A and consumer B. It seemed to him that large user being already allowed for in the condition that 6,000 units were to be consumed per quarter, and there being no constat that customer A

did in fact consume more altogether than consumer B, whose bill for power alone might largely exceed that for the power and light consumed by A, no real reason had been shown for regarding A as a more profitable customer than B. A's load factor, calculating it in the ordinary and proper way over the year and not over a portion of it, was worse than B's and worse substantially in proportion to the amount of light he took.

622—Diversity Factor.

And the taking of two supplies by A did not involve any diversity factor in A's demand, if he rightly apprehended the sense in which Mr. Snell used that term. For A's peak time for power and peak time for light might be, and often were, concurrent, the whole factory, of course, requiring to be lighted, for instance, at 6 p. m. during the winter months when the demand for power was in full force. Though he had defined B as a customer who either took for power only or took for power and partial lighting, he had hitherto considered him in the light of the first alternative, namely, as taking for power only. But if he was now considered as taking for power and for partial lighting any differentiation between him and A was even less, and the preference shown to A was even less defensible. He might well be taking more for power than A and more for light than A and might be taking them in the same relative proportions as A. And yet if he took any light at all from any other he was to be denied the allowance of 25 per cent made to A. That was not in his judgment a mere isolated or exceptional case of hardship such as might be found under any scale increasing by definite steps, but an example of a class of cases likely to occur, and specially aimed at by the circular. It seemed to him impossible to justify such a differentiation as that. . . .

In the result he came to the conclusion that there was a breach both of Sec. 19 and of Sec. 20; of Sec. 19 because B was asking for a supply of power corresponding with that demanded by A and under similar circumstances; of Sec. 20 because an undue preference was by the circular to be given to A as compared with B.

REFERENCES

REPORTS, NATIONAL ELECTRIC LIGHT ASSOCIATION CONVENTION, PHILADELPHIA, PA., JUNE 1-5, 1914.

The papers and reports read before this convention constitute a valuable addition to central station literature. Stimulating papers were read and reports giving the results of exhaustive research along many important lines were presented.

The following are noted as being of especial interest to readers of RATE RESEARCH:

450—Value of Service Theory.

REPORT OF THE RATE RESEARCH COMMITTEE. 32 pages.

The report of this committee contains a complete study of the value of the service theory. The committee holds that of the principles actually used by companies in the formulation of their rate schedules, two are fundamental: First: That the rates of the company should, as a whole, produce an income sufficient to give a fair return on the investment and attract capital freely to the enterprise. The gross earnings from the sale of the product must, therefore, be sufficient to cover all the necessary expenses of operation, including taxes, bad debts, etc., a reserve for renewals and contingencies, interest at current rates, and a reasonable profit in addition. Second: The committee believes that when the rates as a whole are giving a fair return on the investment as above provided for, then the rates to separate individuals and classes which go to make up the rates as a whole, should be so adjusted as to make the total cost as low as possible, and the service rendered as great as possible, by means of the most effective utilization of the plant. The committee has further come to the conclusion that these results can best be obtained by adjusting the various rates to the value of the service rendered, giving proper consideration also to the relative costs of service, and defining value of the service rendered as the amount which the user would have to pay for the same or equivalent service under absolutely fair but not destructive competition; in other words the amount at which the user could serve himself or provide an equivalent or substitute means of service under free but not destructive competition.

A special report on the value of the service theory, giving an exhaustive analysis of the subject, is appended.

711—Form of Schedules.

REPORT OF THE RATE RESEARCH COMMITTEE: FORM AND CONSTRUCTION OF ELECTRIC RATE SCHEDULES. 8 pages.

The Rate Research Committee, in completion of its work of the last two years upon the method and form for the filing of electric rate schedules, has also prepared a general set of rules for such schedules. These rules have been published in a separate pamphlet, so that they can be used to better advantage. The general adoption of this "Form and Construction of Electric Rate Schedules" is urged.

621.1—Load Factor.

REPORT OF COMMITTEE ON HIGH LOAD FACTOR AND NON-PEAK BUSINESS. 94 pages.

This compiles data for those classes of business having high load factor and also those classes in which the maximum demand is not coincident with that of the central station. In dealing with each class of business the report purports to (1) Give a general description of the industry covered, pointing out how electric power is best applied; (2) Furnish operating data and curves showing daily load and variation in consumption during different months of the year; (3) Bring out peculiar features of the business which require special treatment in order to get best results; (4) Make note of any special features in regard to the business in question which would be of assistance to the power salesman. Attention is directed to the necessity of adopting rate schedules and policies which will enable member companies to secure large volumes of business, the character of which requires the use of electricity at times when the central station can most cheaply furnish it. Attention is called to the fact that this class of business may be included under two general headings: (1) Those which have at the present time

been most highly developed among which the most promising may be included, such as electric vehicle charging, the manufacture of ice, etc.; and (2) Those classes which give great promise for the future, but which are at the present time more or less in process of development, such as the electric furnace, electro-chemical processes, etc.

222.3—Method of Keeping Accounts.

SUSPENSE ACCOUNTS, by FREDERICK SCHMITT. 14 pages.

This gives a list of suspense accounts now generally used, first, those accounts which are of a doubtful nature, then, those commonly known as Clearance or Apportionment accounts. It is asserted that the first group of accounts is rightly classified as Suspense, for in each account exists an element of doubt or uncertainty. It is, however, in connection with the second group of accounts that the use of the term Suspense is questionable, for there is nothing doubtful in their nature, each representing costs of a definite character, and it would seem that the term Clearance or Apportionment would serve as a better description of the purpose for which they are created. There follows a description of each of the accounts in each group.

222.3—Method of Keeping Accounts.

COSTS AND STATISTICS, by THOMAS J. WALSH. 17 pages.

This describes the methods used by the Budget and Expense Committee of the Commonwealth Edison Company in its study of investment budget work and operating expenses. This company has adopted the standard classification recommended by the Association and has sub-divided the accounts to fit its requirements, that is, to enable a comprehensive analysis of the various expenses. The different accounts are computed on some appropriate unit basis and the data and statistics are plotted and typewritten on sheets designed for this purpose and illustrated in the paper, and show how a direct comparison of the money spent by the departments each month is made with the previous month and the corresponding month of a year ago, also the cost per unit, shown graphically. The paper also describes the method by which each department head receives the information necessary to make a scientific study of the expenses for which he is held responsible.

222—Accounts.

REPORT OF SUB-COMMITTEE ON TENTATIVE CLASSIFICATION OF CONSTRUCTION AND OPERATING ACCOUNTS: LIST OF STANDARDIZED ACCOUNTS AND DEFINITIONS THEREOF. 70 pages.

As the title indicates, this report consists of a list of standardized accounts, supplemented by definitions, covering 62 pages, which explain concisely what is to be classified under each account.

222—Accounts.

APPLICATION OF SORTING AND TABULATING MACHINES TO THE INVENTORY OF TRANSMISSION AND DISTRIBUTION SYSTEMS, by G. L. KNIGHT and C. V. WOOLSEY. 18 pages.

This paper describes the use of sorting and tabulating machines in obtaining statistical data for reports on the physical property of transmission and distribution systems. The paper is intended to act as a handbook for systematizing the methods of taking the inventory either originally or during any given period, and for the design of forms and codes necessary in the use of the machines. Examples are given of the forms used in taking the data from record books or from the street, the code for getting this data on to the tabulating cards and the forms for summarizing the information obtained after it has passed through the sorting and tabulating machines.

980—Public Relations.**REPORT OF THE PUBLIC POLICY COMMITTEE.** 36 pages.

The committee reiterates its belief in the recommendations made in its previous reports. The section on public service commissions discusses the gratifying attitude of the commissions toward competition. It is pointed out that monopoly in public service can only be justified on the ground that some advantages accrue therefrom to the public. Such a relation cannot be permanently or satisfactorily maintained unless it can be shown that a fair part of the benefit resulting from such monopoly goes to the people at large, who, in the last analysis, are the final arbiters of the question. In the discussion of the importance of fair rates and good service it is pointed out that reasonable, simple public rate schedules, an efficient, well-trained organization, covering every feature of a company's activities, and a service of the highest standards, made available through the latest and most improved type of incandescent lamps and other apparatus, are service features to which every community is justly entitled. If the companies fail in giving these, they are failing to perform their obligations to the public, and to their stockholders. In discussing the importance of generating and distributing electric current on a large scale to widely diversified classes and conditions of services, it is pointed out that however great the aggregate of the service of any one of these classes, mere magnitude of operation cannot possibly obtain the economies which would result from their combination at a single point of generation where their natural diversity factors can be utilized to the improvement of operating economies and the better utilization of invested capital. Other points discussed are industrial education, safety and sanitation, hydro-electric development, public ownership and operation, meter rules, industrial insurance and employees' savings and investment methods. The appendices to the report include a review of some important decisions of the year, the report of the committee on water power of the fifth national conservation congress, and the article on three cent light in Cleveland, referred to in 5 RATE RESEARCH 63.

910—Promotion and Growth of the Business.**REPORT OF COMMITTEE ON ELECTRICAL SALESMAN'S HANDBOOK, 5 pages.**
THE ELECTRICAL SALESMAN'S HANDBOOK.

The report submits the 1914 Handbook, and urges the desirability of the conforming to the plan and methods suggested by the committee for the collection and use of information and data by electrical salesmen.

The handbook includes 1st, A general section relating to The Salesman and His Work. 2nd, Sections Upon Illumination, Electric Power, Electric Heating and Electric Vehicles; each with data sheets giving detailed information on actual installations. The handbook is issued in loose-leaf form, and with the first installments of Handbook sheets, the following equipment is included: (a) A desk filing case for keeping all sheets of the Handbook not actually in use. (b) A pocket binder in which the salesman may carry such sheets of the Handbook as suit his particular branch of the business, or may be of value in the cases upon which he is working. In order to make the new Handbook as flexible and useful as possible, it is issued not as a completed book, but as the original installments of a publication to be added to from time to time as new information is obtained. This Handbook, together with desk file and leather binder, is furnished without charge to each member of the Commercial Section, and extra copies are not for sale excepting to members of the Association, price \$5.00 per copy, which price covers the additional matter that may be added during the Association year.

RATES**450—Value of Service Theory.****VALUE OF THE SERVICE.** Editorial, *Electrical World*, June 6, 1914, p. 1277.

This states that the discussion of the value-of-the-service theory in the rate research committee report, referred to on p. 171 of this issue of RATE RESEARCH, is

valuable and timely because of the increasing interest of public service commissions in electrical rate-making. If companies are to build up their business satisfactorily, they cannot disregard value of service as a factor. There is more logical difference in the value of service for different purposes than in the cost of service for different purposes. Value to the buyer and seller are clearly not the same in many cases, yet an attempt to base relative values on differing costs involves a segregation of elements upon which accountants are unable to agree. Costs are not the same for different forms of service. If values and costs were the same, the simplest way to make rates would be to make uniform rates. But uniform rates would not develop the gross business needed to assure the largest use of the investment. The central station was formerly idle a large part of the day. Then it developed a market for its produce during hours when the customers for whom the plant was originally intended used no energy. By so doing it increased use of capital and efficiency of service and made reduced rates possible for all users. What the companies should do is to make sure that their rates are the same for like purposes. They can justify on plain economic grounds the making of different rates for different classes of service. Rates should be differentiated by class, not by individual. The electrical utility is naturally a monopoly. Yet its rate-making is guided to some extent by actual or theoretical competitive rates. A company would naturally try to make a rate low enough to get business if a competitor was in the market. Though protecting itself and its return on capital, it should also try to make rates equally favorable when it enjoys protection as a monopoly.

410—Cost of Service.

ELECTRICITY DIRECT FROM COAL, by Commercial Agent ERWIN W. THOMPSON. *Daily Consular and Trade Reports*, $\frac{1}{2}$ page, June 4, 1914, p. 1278.

This comments on the recent patenting by Johannes Marschall, of Dresden, of an application of the well-known principle of the thermopile to the practical production of electric light without the intervention of boiler, engine, or dynamo. There is a discussion of the saving to be made by the elimination of the middle processes in the making of coal into electrical energy.

720—Rate Schedules.

DISCUSSION ON BUSINESS PHASES AND CONTRACT FORMS OF THE YONKERS ELECTRIC LIGHT & POWER CO., by B. J. APLIN. Read before the Yonkers Division of the New York Companies Section, N. E. L. A. May 15, 1914.

This gives a brief description of the organization, and the business done by the company. The greater part of the paper consists of brief statements of the rates charged for different classes of service.

INVESTMENT AND RETURN

310—Valuation.

DISCUSSION ON VALUATION FOR THE PURPOSE OF RATE-MAKING. *Proceedings of the A. S. C. E.*, 100 pages, May, 1914, p. 1377.

Reference to earlier installments of this discussion have been made in 4 RATE RESEARCH 94 and 175, and 5 RATE RESEARCH 91. The question is here discussed by J. N. Dodd, Morris Knowles, M. O. Leighton, J. P. Snow, Arthur L. Mills, J. M. Schreiber, J. P. Newell, Gardner S. Williams, George F. Swain, J. W. Ledoux, Albin G. Nicolaysen, J. B. Lippincott, Alfred Noble, M. L. Byers, and Frederic P. Stearns.

372—Employees Profit Sharing.

REPORT ON PROFIT-SHARING AND LABOUR CO-PARTNERSHIP ABROAD. Pamphlet, 164 pages.

The original of this report of the British Government Board of Trade, reference to which was made in 5 RATE RESEARCH 75, has now been received. It may be purchased of T. Fisher Unwin, London, W. C., for 1 shilling (24 cents).

MUNICIPALITIES**800—Municipalities.**

MUNICIPAL MADNESS, by WILLIAM H. HODGE. *Public Service*, 5 pages, June, 1914, p. 189.

This comments on the reckless methods by which most American cities are adding to their municipal debts, without redeeming previously incurred debt to any great extent. It is said that the people realize nothing of the unsound economic and financial methods which underlie the governmental operation of their cities. The immense municipal debt of Cleveland, Ohio, is referred to. In connection with the Cleveland municipal electric light plant, it is said that the pledging of the public credit, as in this case, to duplicate property already existing, and with the implied intention of possibly rendering the established property a partial or total loss, is municipal stock watering of the most flagrant kind. It means the unnecessary and wasteful expenditure of public funds and miscarriage of public credit. Economically it cannot be condoned.

830—Public Ownership.

PUBLIC OWNERSHIP OF RAILROADS, WATERWAYS AND WATER POWER, by WALTER ROSCOE STUBBS. *The Saturday Evening Post*, 5¼ pages, June 6, 1914, p. 3.

This article advocates public ownership of the railroads. There is a discussion of the evils of railroad capitalization, management, etc., in the past. It is claimed that private ownership is responsible for practically all great evils of the day, such as railway accidents, congestion of the poor districts in cities, etc.

The article consists chiefly of general statements. It is stated that public ownership will tear up by the roots the most dangerous, corrupting and insidiously powerful political influence in the United States. It will remove the political machinery through which elections are influenced or controlled in the interests of monopolies, trusts, combines, and every species of special privilege. It will take from the rich and powerful the greatest source of their political power, through which national, state and municipal legislation and Federal judicial appointments are influenced or controlled in the interests of corporations. It is claimed that public ownership will make railway operation comparatively safe for railway workers. There are now every year more than one hundred and fifty thousand persons either killed or injured as a sacrifice to profits under private ownership. It will benefit labor further by the betterment of wages and greater steadiness of employment. Public ownership will wipe out of existence preferential rates on raw materials and manufactured products that now favor certain localities and cities. This favoritism—this inequality of rates and service—results in the longest possible haul for railways. It accelerates the crowding into cities and manufacturing districts of poorly housed, ill-fed, ill-clothed workers; and these conditions are producing many of the perplexing evils of our time. The taking over of the railways by the Government means precisely taking them out of politics. Our cities furnish excellent illustrations of the fact that the publicly owned utilities are not in politics.

COURT DECISION REFERENCES.

112—Franchises.

TACOMA RY. & POWER CO. v. CITY OF TACOMA. Decision of the SUPREME COURT OF WASHINGTON. May 7, 1914. 140 Pacific 565.

The Company operated under a franchise which permitted it to furnish electricity for power and heat but not for light; and which provided that, if the company failed to perform any of the conditions specified in the franchise, the franchise would automatically become void thirty days after notice of such failure had been given by the city to the company. The company, in December, 1908, entered into a contract with the Northern Pacific Railway Company, wherein it agreed to furnish the company all the electric power it used "for power purposes and for lighting purposes, for a period of ten years." The Court holds that the franchise is forfeit. The company contended that the city's power to so limit the franchise was abrogated by the public service commission law. (Laws 1911, p. 543.)

That law deals only with the questions of safety, efficiency, rates, and equality of public service. The power to grant a limited franchise is still in the city. No power was given to the public service commission to grant, modify, or abrogate franchises or contracts arising out of franchises, except in regard to rates and the regulation of service in respect to its safety, efficiency, and equality. . . .

100—Public Service.

DEL MAR WATER, LIGHT & POWER CO. v. ESHLEMAN et al. Decision of the SUPREME COURT OF CALIFORNIA. April 11, 1914. Rehearing Denied, May 11, 1914. 140 Pacific 591.

In this case the California Supreme Court reverses a decision of the California Commission, which held that a private water company, since its charter provisions permitted it to become a public service corporation, and since it was conducting a water system for compensation within the State, was a public service corporation and therefore must supply water to a certain applicant who had previously been refused service. The Court holds that the water company, which was primarily organized by a real estate company to furnish water to purchasers of its land, is not a public service corporation.

The Railroad Commission has no power to compel a corporation which owns property in private right, and has not dedicated it to any public use, to apply it to a public use of any kind.

It is held that the provisions of the California law . . . are limited in their application to such public service corporations as may have devoted their entire property to the use of the entire public, or to those which may have undertaken to supply a certain district, such as a city, and dedicated their property to that service, and which afterwards may have failed or refused to give to such district an adequate service, or failed or refused to extend the system and supply to parts of the district, when it was within its means to have done so and such extension would not be unreasonable. In such cases it would be entirely proper to give such a commission power to compel adequate service within the territory which the corporation has undertaken to serve and to compel any reasonable extension of the service to other parts of such territory. But even a constitutional declaration cannot transform a private enterprise, or a part thereof, into a public utility, and thus take property for public use without condemnation and payment.

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June 17, 1914

No. 12

RATE RESEARCH



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RATE RESEARCH COMMITTEE
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NATIONAL ELECTRIC LIGHT ASSOCIATION
120 WEST ADAMS STREET - - - CHICAGO

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Rate Research

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Rate Research

Vol. 5

CHICAGO, JUNE 17, 1914

No. 12

For statement of facts and opinions contained in papers abstracted herein, the Association does not hold itself responsible

RATES

PACIFIC POWER COMPANY, NEVADA

720—Rate Schedules.

Schedule of Electric Rates of the PACIFIC POWER COMPANY for the State of Nevada, effective January 1, 1913, as published in the 1913 Report of the NEVADA PUBLIC SERVICE COMMISSION.

450—Value of Service Theory.

Attention is called to the power schedule of this company as these rates are typical "Value of the Service" rates.

LIGHTING RATES.

Short-hour service—residences, early-closing stores, etc.

Rate.

- 20 cents per kilowatt-hour for consumption of 50 kilowatt hours or under.
- 18 cents per kilowatt-hour for consumption of from 50 to 100 kilowatt hours.
- 15 cents per kilowatt-hour for consumption over 100 kilowatt hours.

Long-hour service—hotels, saloons and other all night service.

Rate.

- 15 cents per kilowatt-hour for consumption of 50 to 100 kilowatt-hours.
- 13 cents per kilowatt-hour for consumption of 100 to 200 kilowatt-hours.
- 11 cents per kilowatt-hour for consumption of 200 to 300 kilowatt-hours.
- 10 cents per kilowatt-hour for consumption of 300 to 500 kilowatt-hours.
- 9 cents per kilowatt-hour for consumption over 500 kilowatt hours.

Prompt Payment Discount.

- 10 per cent discount if paid on or before the 10th day of the month following that for which bill is rendered.

Minimum Charge.

- \$2.00 per month, or fraction thereof, per meter.

FLAT RATES.

The following charges to flat rate consumers will be made for each month or fraction of month throughout the consumer's connection with the company's service.

Rate—Business Houses.

\$1.00 per lamp for the first 10, 60-watt lamps installed.
 75 cents for all additional lights installed.

Rate—Residences.

\$1.00 per lamp for the first 2 lights installed.
 50 cents per lamp for all additional lights installed.
 \$1.00 for each flat-iron installed.

COOKING AND HEATING RATES.**Rate.**

5 cents per kilowatt-hour for current consumed.

Prompt Payment Discount.

10 per cent discount if paid on or before the 10th day of the month following that for which bill is rendered.

Minimum Charge.

\$3.00 per month, or fraction thereof, per meter.

POWER RATES.

For intermittent or hoisting service.

Rate.**Demand Charge.**

\$2.00 per horse power per month, based on the rated horse power capacity of motor.

Energy Charge.

4 cents per kilowatt-hour for all current consumed.

For continuous service for mines or mills, the total consumption being less than 8, 168 kilowatt-hours (16 h. p.)

Rate.

4 cents per kilowatt-hour for current consumed up to 2,500 kilowatt-hours (4.59 h. p.), per month.

3 cents per kilowatt-hour for all excess use up to 8,168 kilowatt-hours (15 h. p.), per month.

For continuous or mill service (long term contracts for large consumers).

Rate.

3 cents per kilowatt-hour for all current consumed over 8,168.7 kilowatt-hours (15 h. p.), up to, and included, 13,614.5 kilowatt-hours (25 h. p.), per month.

2 $\frac{3}{4}$ cents per kilowatt-hour for all current consumed over 13,614.5 kilowatt-hours (15 h. p.), up to and including 27,229 kilowatt-hours (50 h. p.), etc., to

1.4 cents per kilowatt-hour for all current consumed over 326,748 kilowatt-hours (600 h. p.), up to and including 544,580 kilowatt-hours (1,000 h. p.)

CONTRACT POWER RATES.

For the mining and milling of very low-grade ores where power in excess of 400 horse-power will be used, special contracts will be made whereby the charge for the power used will be based upon the value of the ores mined and milled, as follows: The basis rate shall be 1 cent per kilowatt-hour for power used for the

mining or treatment of ores the value of which is \$5.00 per ton, with a decrease in the rate of $\frac{1}{2}$ mill per kilowatt-hour for each decrease on 25 cents in the value of the ore below \$5.00 per ton, and an increase in the rate of $\frac{1}{2}$ mill for each increase of 25 cents in the value of the ore over \$5.00 per ton.

Contract rates with the Aurora Consolidated Mines Company, term of contract May 1, 1914, to May 1, 1920. Amount of power, 400 horse-power or more.

Rate per kilowatt-hour.	Recovered Values of Ore.
\$1.40	\$7.00
1.35	6.75
1.30	6.50
1.25	6.25
1.20	6.00
1.15	5.75
1.10	5.50
1.05	5.25
1.00	5.00
.95	4.75
.90	4.50
.85	4.25
.80	4.00
.75	3.75
.70	3.50
.65	3.25
.60	3.00

COMMISSION DECISIONS

WISCONSIN

300—Investment and Return.

KITTLESON ET AL. V. ELROY MUNICIPAL WATER AND LIGHT PLANT (pop. of Elroy 1,729), Alleging Discriminatory and Insufficient Rates, and Unsystematic Records and Accounts. Decision of the WISCONSIN RAILROAD COMMISSION, Fixing Rates and Requiring Revision in Methods of Operation and in the Systems of Accounting in Both Departments of the Municipal Plant, May 16, 1914.

222—Accounts.

In making the usual investigation for the purpose of rate making the Commission was forced to use estimates almost entirely on account of the meagre and unreliable records kept by the municipal utilities.

The general records of the electric and water departments are merged with the general city records. The reports of the utility to the Commission are little more than guesses, as no records were kept of the separation of expenses between the water and the electric departments or between operating expenses and extensions. . . .

The following citation is applicable to the situation found in Elroy: "The fact that sufficiently complete information for a careful revision of the respondent's rate schedule is not available, has already been alluded to. Under somewhat similar conditions, when the application has been for an increase of rates, the Commission has dismissed the case, holding it to be the duty of the utility to maintain

such records of its operation as may be necessary for a proper analysis of its business. But under the conditions found in this case, the absence of certain information can hardly be permitted to stand in the way of those adjustments which available facts indicate will lead to greater equity between the utility and the public and between the different classes of consumers. To permit uncertainty, arising from the utility's failure to provide for ordinary utility records, to completely prevent adjustment and reductions of rates would be adding an additional incentive for failure on the part of the utility to determine and record important facts concerning its business with the public." (*City of Rhinelander v. Rhinelander Lighting Co.* 1912, 9 W. R. C. R. 406, 433.)

It is ordered that the records of the departments be kept as prescribed by the Commission.

650—Discrimination.

Certain consumers, it is understood, are being supplied free, contrary to the provisions of the Public Utilities Law. Such free service must be discontinued. . . .

From the foregoing income accounts it will be seen that there has never been any charge made for municipal hydrant rental or for street lighting. This omission should be remedied if the rates are to be equitable to all consumers.

No allowance had been made for depreciation and the commission provided for an annual reserve to cover depreciation. An allowance was also made for interest and taxes in the expenses of both departments.

The rates provided for the electric department are as follows:

720—Rate Schedules.

COMMERCIAL LIGHTING.

Rates.

10 cents net or 11 cents gross for the first 3 kilowatt-hours or less used per month per 100 watts of active load.

8½ cents net or 9½ cents gross for the next 6 kilowatt-hours per month per 100 watts of active load.

7 cents net or 8 cents gross for all excess use per month per 100 watts of active load.

Determination of Active Connected Load.

Active connected load shall in each case be a fixed percentage of the total connected lighting load installed upon the consumer's premises. [See schedule of rates, 5 Rate Research, p. 83.]

Prompt Payment Discount.

The difference between the gross and the net rate shall constitute a discount for prompt payment.

Minimum Charge.

50 cents per month per meter.

STREET LIGHTING RATES.

Street lights to burn on moonlight schedule.

Rates.

\$1.00 per 50-watt unit per month.

\$1.75 per 120-watt unit per month.

MARYLAND**226.2—Extension of Service.**

Complaint vs. THE CHESAPEAKE AND POTOMAC TELEPHONE COMPANY OF BALTIMORE CITY, in the Matter of Telephone Rates and Service. Decision of the MARYLAND PUBLIC SERVICE COMMISSION, Making Certain Changes in Toll Charges and Investigating Service Conditions. March 2, 1914.

One of the matters concerning service passed upon by the Commission was the question of extension of the Company's lines. In certain instances the Company's lines are overloaded and the Commission says that such a condition should not be allowed to continue, holding that if intending subscribers cannot be accommodated without unduly interfering with other subscribers, they should be held off until such time as the number of applicants is sufficient to justify the equipment necessary to give adequate service. The Commission discusses the matter of extensions of public utility service as follows:

The company cannot be expected to make extensions of its lines which will cause a permanent loss. . . .

In other public service enterprises it is not unusual for extensions to be made where the situation presents a reasonable prospect for the development of a paying business; and there is no reason why a telephone company should not take similar risks, and where it clearly appeared that existing patrons of a utility were deprived of adequate service by reason of the deficiency of equipment, a Commission would order the necessary additional equipment, although a temporary loss to the company might result, if the total revenues of the company were sufficient to yield a profit. The duty to serve does not, in all cases, impose upon the serving company the obligation to serve when its capacity to do so is exhausted. The innkeeper is not obliged to take a traveler after all his rooms are occupied. A steamboat cannot be required to take on passengers after its legal quota is on board. It would be a reasonable rule to prohibit the taking on of passengers by a railroad company or a street railway company after a certain number had boarded the cars. The difficulties encountered in enforcing rules in the last two cases are not present in telephone traffic. . . .

REFERENCES

RATES

616.1—Street Lighting.

STREET LIGHTING BY SPECIAL ASSESSMENT. Editorial, *Electrical World*, June 13, 1914, p. 1373.

This comments on the value to merchants, of the special-lighting systems now generally maintained in the business districts of cities. It is said that the success of this lighting depends on co-operation among a group of business men, and this concerted action must be practically unanimous; otherwise there will be irregularity in the spacing of the lamps with frequent comparatively dark spots. As a solution of the problem, it is suggested that commercial street lighting should be supplied under a special-assessment system and paid for by the owners of the abutting property.

614—Heating and Cooking.

ELECTRIC HEATING AS APPLIED TO MARINE SERVICE, by C. S. McDOWELL and D. M. MAHOOD. To be Presented at the Annual Convention of the A. I. E. E., Detroit, Michigan, June 23, 1914. *Proceedings of the A. I. E. E.*, 11 pages, June, 1914, p. 861.

This states that electricity is being adopted, to a great extent, for space heating in marine work, because of the simplicity and low cost of installation, saving in weight, freedom from leaks, noises and disagreeable odors as compared to steam heat, availability for heating of individual rooms, ability of placing heaters where most efficient, portability so that storerooms and other seldom-used spaces may be readily heated when desired, ease of regulation so that individual staterooms, etc., can be maintained at any desired temperature without affecting the whole system. A comparison of convector and radiant heaters is given, the proper use of each type is shown, and the conclusion drawn that for space heating on shipboard with metal decks and bulkheads, the convector heater is most efficient. Curves are given showing results obtained on tests to determine the best type of heater for shipboard, and desirable features of heater are indicated. With low cost of electricity on shipboard, electric heating compares favorably, in cost of maintenance, with steam heating. It interferes very little with the lighting load, thus increasing the load factor, and seldom requires extra generator capacity.

621.1—Load Factor.

METHODS OF KEEPING DOWN PEAKS ON POWER PURCHASED ON A PEAK BASIS, by T. E. TYNES. To be Presented at the 31st Annual Convention of the American Institute of Electrical Engineers, Detroit, Michigan, June 23, 1914. *Proceedings of the A. I. E. E.*, 5½ pages, June, 1914, p. 1021.

The author mentions two general ways of reducing peaks, the first being to furnish the peak power from a separate source, such as a local steam turbine, and the second to store some of the power furnished by the power company, which is given up later when the peak demand comes on. In the case of the plant described by the author, a mixed pressure turbine was installed to take the peaks, this being selected on account of available exhaust steam from pumps, air compressors, etc. The turbine is direct-connected to two direct-current generators mounted on a common bed-plate. The first plan tried was to use a motor-driven rheostat operated with clutches which, in turn, were operated by solenoids energized by current controlled by a contact-making ammeter. After the installation of a maximum demand meter which integrates the one-minute peaks, the rheostat

control was found to be too slow, and a special peak-taking device was then to be installed. This device consists of a rod carrying points which successively make contact with mercury cups, and which is operated by the moving element of the graphic meter. These mercury contacts close relay circuits which operate to short-circuit sections of resistance in the field rheostat of the turbo-generator, raising its voltage, and also cut in sections of resistance in the field rheostat of the motor-generator set, weakening its field and thus reducing its load.

612.4—Distribution Economies.

LONDON'S ELECTRICITY SUPPLY, by HAYDN HARRISON. Article and Editorial, *Electrical World*, 2 pages, June 13, 1914, p. 1390.

This article describes the system of electricity-supply in London, and draws attention to its great complexity. The recommendations of the Merz-McLellan Report are referred to; and it is pointed out that conditions in London are such as to produce favorable load-factors. It is said that the suggestion made in the report of general municipal ownership of the larger project, the details of operation being left in the hands of private authorities, may lead to something practicable. The editorial reviews the situation, compares it briefly to the situation in American cities, and concludes that the time is ripe for radical improvement, and some way should be found of bringing the various public and private undertakings together to obtain the advantages of a bulk supply generated at a far lower cost than is now possible even in the most economical of the existing stations.

224—Rate Regulation.

RAILROAD RATES. Editorial, *The Economist*, June 6, 1914, p. 1126.

This states that the statement in Berlin of Arthur Von Gwynner, managing director of the Deutsche Bank, that the railroads of the United States should have permission to raise rates, is a strong backing of the application which has been made to the Interstate Commerce Commission, from a source which is not prejudiced in favor of the companies. He calls attention to the fact that American roads pay twice the wages paid in Prussia and are allowed to charge only half the continental rates or one-third the English rates. He finds that the present position of the American railroads is a menace to the finances of the world. In regard to the movement against the trusts, he suggests that the United States Government investigate recent German legislation, which appears to be protective of the companies and the public. Certainly a lift in rates would be of immense advantage to the railroads of this country and our people should get rid of blind prejudice against the large corporations, but the railroads themselves have a duty, and that is to rehabilitate themselves in the confidence of the public by a careful supervision of all the roads in the United States. A lift in rates will not enable our roads to obtain all the capital they need. It is confidence that is lacking, and the better class of railroad men should proceed to establish that confidence as speedily as possible.

INVESTMENT AND RETURN

310—Valuation.

VALUATION OF PUBLIC UTILITIES FROM THE RAILWAY POINT OF VIEW, by SAMUEL O. DUNN. *Journal of the Western Society of Engineers*, 9 1-3 pages, May, 1914, p. 507.

This states that the tap root of the theory and practice of valuation of public utilities is imbedded in two familiar provisions of the Constitution of the United States. These are the provisions in the fifth and fourteenth amendments which

in substance prohibit the nation or any state from taking private property for public use without due process of law and just compensation. There is a discussion of various debated questions in valuation matters, such as appreciation in land values, the value created by the investment of surplus earnings, depreciation and going value. In regard to appreciation, it is said that you can no more constitutionally confiscate the increment in the land of a railroad company than you can constitutionally confiscate the increment in land which its stockholders may own and cultivate as farms in their individual capacities. In regard to investment of surplus earnings and depreciation, the statement is made that the value created by investment from earnings is there, and, being there should be and must be counted; while the value which has disappeared because of depreciation and of the failure to provide adequate depreciation or sinking funds, is gone and, therefore, should not be counted. There is a consideration of the question of whether, when the valuation of all the railroads is completed, it will justify a general advance or a general reduction of rates, the conclusion being that a general advance is the more probable.

310—Valuation.

PUBLIC UTILITIES. THEIR COST NEW AND DEPRECIATION, by HAMMOND V. HAYES. REVIEW by ROBERT H. WHITTEN, *American Economics Review*, 1³/₄ pages, June, 1914, p. 384.

Mr. Hayes states that the engineer or accountant is not concerned with fair value, but merely with the presentation to the court of certain facts which the court may consider in its determination of fair value. In determining replacement cost the engineer should follow strictly the cost-of-reproduction theory, without regard to the effect of the method followed on the equity of the result as between the utility and the public. Considerations of equity and justice may be left to the court or commission. Dr. Whitten states that the author's treatment of this subject needs to be qualified or supplemented by a statement that if original cost and replacement cost are developed consistently without regard to the apparent equities, all steps in the process should be clearly shown. Thus, if under the reproduction method pavement over mains laid without expense to the company is included in the reproduction cost, the cost of such mains should be made a severable item in the total reproduction cost found, so that a court or commission in considering the facts could give this element such treatment as it considers just. It should be pointed out that the court or commission will often use replacement cost merely as a test of original cost, or vice versa. It is said that perhaps the author's most important contribution to the study of the subject is his demonstration that original cost can be obtained without great difficulty; and that the book contains a very clear and comprehensive discussion of the depreciation problem. In conclusion, it is said that the book fulfills admirably the three main purposes stated by the author in the preface, i. e., to point out: first, that fair value must be determined by the court and not by the appraiser; second, that original cost can and should be obtained; third, that accrued depreciation should in general be deducted in determining fair value.

PUBLIC SERVICE REGULATION

200—Public Service Regulation.

REPORT OF THE PUBLIC SERVICE COMPANY OF NORTHERN ILLINOIS FOR THE FISCAL YEAR ENDING DECEMBER 31, 1913. Pamphlet, 9 pages.

Mr. Insull comments on the passage of the Illinois Public Utilities Law on page 5 of this report. He states that it will doubtless cause some operating inconvenience for a time, but no serious difficulties are anticipated, and the ultimate result should be beneficial both to the public and to the Company. The Company's service is rendered in fourteen counties and in one hundred and forty-four municipalities, with varying ordinance requirements; and eventually regulation by one body must naturally tend toward a larger degree of uniformity.

200—Public Service Regulation.

THE STATUS OF REGULATION OF PUBLIC SERVICE, by A. G. RAKESTRAW. *Electrical Engineering*, 1 $\frac{3}{4}$ pages, June, 1914, p. 258.

This touches upon the differences between the character of private business and public service. It is pointed out that competition and municipal ownership were at first sought as the cure for high rates, but that both were unsuccessful. It is shown that generally legislation enacted by borough and city councils was totally unreasonable, amounting to confiscation. This was due to the fact that the councils, as a rule, were prejudiced and without adequate means of obtaining information. The passage of such laws and ordinances was followed by numerous appeals to the courts, with consequent litigation, expensive alike to the corporation and the municipality and affording but little relief to the public. Following this direct legislation came the idea of regulation by a state board of experts, who should act in a judicial capacity, acting for the public with power to correct abuses, adjust rates, prevent discrimination, provide for safety, and at the same time guarantee the corporation a reasonable return on the investment, protect it from competition, exploitation, and confiscatory ordinances. This is the commission system in present use, which has in general proved eminently satisfactory. There is brief reference to the general character of the laws which have been passed in the various states. It is said that Wisconsin and Indiana are recognized as having especially good laws, and in these states, as in a number of others municipal plants are subject to just the same regulation as those privately owned, which is just.

222—Accounts.

INTERSTATE COMMERCE COMMISSION CLASSIFICATION OF ACCOUNTS. Article and Editorial, *Electric Railway Journal*, 3 pages, June 13, 1914. p. 1321 and p. 1311.

This discusses the new uniform system of accounts for electric railways, recently approved by the Interstate Commerce Commission. A list of the titles of the accounts in the new system is given; and attention is drawn to the fact that depreciation and valuation expenses are included, and a condensed classification of operating expenses provided for small carriers.

The editorial discusses the desirability of the general adoption of the classification by state commissions, so that uniform accounting may be secured.

200—Public Service Regulation.

PUBLIC UTILITY REGULATION FROM THE STANDPOINT OF THE PUBLIC AND THE ENGINEER, by HAROLD ALMERT. *Journal of the Western Society of Engineers*, 6 pages, May, 1914, p. 516.

This comments on the general movement toward the creation of regulating commissions throughout the country. It is said that there is no doubt whatever that public utility corporations in many cities have been guilty of grave errors in the past. Some of these errors have been committed unknowingly, and others knowingly and more or less deliberately, but it is also certain that among the ranks of the reformers we find evidences of folly and of prejudice against a fair adjustment of the situation. The leading cause of the intense political agitation throughout the country is this determination of the people to secure a readjustment of what they believe, for want of accurate knowledge of the true conditions, to be excessive charges for service. It is held that to secure unbiased rulings on what is good and adequate service and what are reasonable rates, the jurisdiction must be removed beyond the influence of local prejudices, and those passings judgment must be free from political interferences and prevented from using their offices as stepping stones for gratifying political aspirations. There is a discussion of the hurried character of most of the recent legislation; and of the importance of commission personnel. It is said that there are at this time several states that have passed

only mature legislation and that have competent commissions, fully qualified to represent the interests of the public and the utility alike, and who are equipped with well organized technical staffs, supplied with ample appropriations for making the fullest investigations to insure accurate conclusions. These commissions are, and will continue to be a blessing to all concerned, as long as they are kept free from politics and the commissioners are permitted to continue in office as long as they render good and efficient service, and this form of regulation, no doubt, is the most effective and efficient that we know of today. When these commissions were young, they were careful not to draw hasty conclusions and render ill-advised decisions which might prove disastrous, but rather felt their way until they were sure that they were competent to pass judgment on any given situation.

200—Public Service Regulation.

DISCUSSION OF PUBLIC UTILITIES. *Journal of the Western Society of Engineers*, 17½ pages, May, 1914, p. 522.

This is the discussion at the public utility symposium of the Western Society of Engineers held on May 16, 1914, at which the papers by Mr. Andrew Cooke, Mr. Samuel O. Dunn and Mr. Harold Almert, referred to in this number of RATE RESEARCH were read. Those contributing to the discussion were Onward Bates, John W. Alvord, William D. Jackson, Shelby S. Roberts, W. A. Shaw, L. E. Cooley, A. C. King and Morgan Brooks. Mr. W. A. Shaw of the Illinois Public Utility Commission, stated that it is the object and the aim of each member of the Illinois Public Utility Commission to do his work without fear or favor, and in rate making to return a fair compensation upon a fair value.

200—Public Service Regulation.

GOVERNMENT REGULATION OF RAILROADS FROM THE INVESTOR'S STAND-POINT, by ANDRES COOKE. *Journal of the Western Society of Engineers*, 4½ pages, May, 1914, p. 503.

This states that generally speaking, the rate of interest which an investor demands at any particular time varies according to the risk incident to the investment. There is a description of the principal factors which must be considered in determining the risk involved in any railroad enterprise. The final solution of the problem of financing and operating railroads will be government regulation on a basis which will afford to the investor protection against loss from dishonesty and fraud, needless and disastrous competition, unfair taxation and unjustifiable reduction in rates. By thus making railroad investments attractive by affording the investor the maximum protection, the public will be able to secure the most efficient service at the minimum cost.

MUNICIPALITIES

820—Municipal or Local Regulation of Utilities.

ATTACK ON A PUBLIC UTILITY COMMISSION. Editorial, *Electrical World*, June 13, 1914, p. 1373.

This discusses the attack on the work of the Wisconsin Commission contained in the pamphlet of the Minnesota Home Rule League referred to in 5 RATE RESEARCH 92. The statement is made that the league finds fault because the commission is not abjectly in favor of the thing for which the league stands—that is, municipal ownership. Why the Wisconsin Commission cannot promote home rule ought to be tolerably clear. It was created to take from the cities a power of home rule which the cities had abused and to set up instead a state power to decide the issues between company and city. It cannot harass utilities without regard to the rights of the company because the law was not created to provide a body to

be a mere agent for distressing the company. If the commission is true to the judgment of the public represented in that law, it must decide without bias for either side the issues before it. It is asserted that if there is a redeeming clause in the booklet, it is the grudging admission that "nothing but the integrity and high personnel of the commission saved it from being open to the suspicion of direct collusion" with one company. But the booklet does not carry through its forty-six pages, as it should, the evident conviction of its writers as to the "integrity and high personnel" of the commission. Because it so grossly misrepresents the attitude and work of the commission, the campaign and erroneous statements of the league should not be allowed to go unanswered.

840—Public Operation.

BIRMINGHAM'S FOUR MUNICIPAL TRADING OPERATIONS, by CONSUL ALBERT HALSTEAD, Birmingham, England. *Daily Consular and Trade Reports*, 1 page, June 13, 1914, p. 1539.

This discusses the net profits of the water, gas, electric, and tramway undertakings of the city of Birmingham. With regard to the electricity undertaking, the statement is made that through increased demand for electrical current following lower prices, which increased demand represented an increased output of 10,500,000 units, the accounts of the electric supply department were the best since it was started, the gross profit being \$816,900, out of which, after meeting capital charges and applying \$94,897 to renewals, an amount was available for reduction of taxation.

840—Municipal Operation.

REPORT OF EDMONTON MUNICIPAL RAILWAY. *Electric Railway Journal*, 2 $\frac{3}{4}$ pages, June 13, 1914, p. 1334.

This quotes from the reports, published by authority of the Municipal Council of the City of Edmonton, Alberta, showing the reasons for the deficits in operation by the City and the increase in fares which was made necessary by continued losses.

830—Public Ownership.

PUBLIC OWNERSHIP MOVEMENT IN DISTRICT OF COLUMBIA. *Electrical World*, $\frac{1}{3}$ page, June 13, 1914, p. 1377.

This comments on the fact that the committee on the District of Columbia of the House of Representatives voted on June 6 to report favorably to the House the Crosser bill providing for public ownership and operation of the electric railways in the District of Columbia. The vote in the committee is said to have been nine to eight. Reference is made to the discussion of the Washington situation, by the Public Policy Committee of the N. E. L. A. in its annual report (see 5 RATE RESEARCH 173). The committee characterized the movement in Washington as one of the most serious of recent developments toward government ownership and operation, and as one of the most serious political and economic import.

831—Purchase by Municipality.

THE COMPULSORY PURCHASE OF ELECTRICITY UNDERTAKINGS. Article in 6 parts, *The Electrician (London)*, 13 pages, April 17-May 22, 1914.

In this series of articles the harmful effect of the compulsory purchase of electricity undertakings by municipalities is considered, more particularly in regard to London electricity supply. Article I deals with the relation of private enterprise to progress as shown by the various public utilities. In Article II the reward of private enterprise is discussed, and it is pointed out that this reward, as measured by dividends, is by no means as large as is often supposed. In Article III the fallacy of municipal trading is discussed, emphasis being laid on the danger of

permitting the Government or a municipality to have a monopoly, such danger being greater than in private enterprise. This danger is well exemplified in the history of the National Telephone Co. Article IV is a brief history of the London electricity supply companies. In Article V the effect of compulsory purchase looming in the near future is shown to cause necessarily a less active policy than would otherwise be the case, and increasing difficulty in expansion. In Article VI the effect of compulsory purchase in the near future is shown to cause a restriction of capital expenditure, and is illustrated by reference to the last few years of the existence of the National Telephone Co. It is shown that working under municipal control cannot be so efficient as private enterprise; after which various alternatives are considered. These are the "mixed" type of undertaking as found in Germany; the control of dividends, as in the case of gas companies; and the working under control of an independent authority. This last is found to be extremely successful in America, and is suggested as a solution of the present difficulty in London electricity supply. The last article in the series, advocating the American system of regulation by commission, analyzes the work of the Wisconsin Commission as evidenced in its report for the year 1910-11, as an example of thoroughly successful regulation.

830—Public Ownership.

MUNICIPAL OWNERSHIP HEARING IN WASHINGTON. *Electric Railway Journal*, 1½ pages, June 6, 1914, p. 1275.

This gives an abstract of the testimony given at last week's hearing on the Crosser Bill, which provides for municipal ownership of the electric railways in the District of Columbia. The testimony during the week was largely in favor of the bill. Commissioners Newman, Siddons, and Harding testified, but asked to be excused from discussing details of the management, service, and physical valuation of the local railways, because these features are pending in an inquiry before the District Public Utilities Commission.

840—Public Operation.

SOCIALIST ADMINISTRATION READY TO SELL MUNICIPAL ELECTRIC PLANT. *Electrical Review*, 1-8 page, June 13, 1914, p. 1184.

This states that preliminary plans are well under way for the sale of the municipal electric lighting plant of Martin's Ferry, O., by the present administration of that city. Bids have been submitted by two private corporations, the Sunnyside Electric Company and the Wheeling Traction Company. Although the present administration is a Socialist one and it is a known fact that municipal ownership is strongly advocated by the Socialists, the members of that party now in power at Martin's Ferry are favorable to the sale of the plant. The chief cause for selling the plant was the fact that it cost the city annually almost double the offer made by either company.

830—Public Ownership.

MR. MELLEN ON GOVERNMENT OWNERSHIP. THE IRRESPONSIBLE POLITICAL BOSS. Editorials, *Electric Railway Journal*, June 6, 1914, p. 1239.

The first editorial outlines Mr. Mellen's recent statement in favor of public ownership, as the best means of avoiding the power of the "financial boss." The second editorial states that it agrees with Mr. Mellen that there have been evils in private ownership, a conspicuous example being that of the road of which he had charge. But if he had put into force ten years ago the rules which he now recommends of strict accounting, of making the directors direct and of full publicity in regard to all matters connected with his property, many, if not most, of the evils which the New Haven Railroad has undergone would not have occurred. On the other hand, with public ownership there would be the same troubles, but multiplied a thousand times, as those to which Mr. Mellen calls attention in his exhortation of private ownership. It may be true that absolute power is usually abused,

but the possibilities of such abuse by the executive under private ownership is prevented in a number of different ways. The power which he can exercise is checked by the financial interests in control of the property, by directors who direct, by the regulatory commissions, by the officers of the law, and by public opinion, provided there is publicity so that all action by the railway officials is known. But it would be difficult to conceive of a more arbitrary and irresponsible body than a political organization in power under the present system of American politics. The regulatory body, if there was any, would be of the same political stripe, and it is hard to make public opinion effective in any political contest where the patronage is considerable, as has been shown in many instances in the case of Tammany Hall and other well-intrenched political organizations. There are many objections to the government ownership of public utilities, but one of the greatest is the power which it would confer on the irresponsible political leader.

840—Public Operation.

POSSIBLE CHANGE IN TELEPHONE SYSTEM IN MILAN. *Daily Consular and Trade Reports*, $\frac{3}{4}$ page, June 9, 1914, p. 1423.

This comments on the fact that for some time there has been great complaint among the subscribers and business men of Milan over the telephone service, the great criticism being that the equipment is old and that the business is not systematized sufficiently to handle the large amount of daily business. There is a description of the plan for betterment of the service offered by the government at a recent meeting of citizens called to discuss the situation. It is said that it is believed by the more conservative element in the city, however, that it will be considerable time yet before the Government will grant Milan the new telephone system and actually commence upon the planned improvements.

830—Public Ownership.

GOVERNMENT OWNERSHIP OF ELECTRICAL MEANS OF COMMUNICATION. REVIEW, by A. N. HOLCOMBE. *American Economics Review*, $1\frac{1}{2}$ pages, June, 1914, p. 448.

This describes the events leading up to the publication of this report and gives briefly the recommendations made, and the propositions it attempted to prove. It is said that the validity of the evidence in support of the proposition that private monopoly is less efficient than governmental monopoly, charges higher rates, and renders less adequate service, has been challenged by the American Telephone & Telegraph Co. (Commercial Bulletin, No. 7, Commercial Engineer's Office, New York, March 2, 1914); and that even without the aid of the exhaustive criticism by the engineers in the service of the telephone company, it would be evident to the economist that the Postmaster General's statistical evidence does not demonstrate his propositions, as he supposes.

GENERAL

980—Public Relations.

AT YOUR SERVICE. Pamphlet, 16 pages. Published by the Detroit City Gas Company.

This booklet, published for distribution to the consumers of the company, gives popular one-page introductions to the heads of the departments. Each page contains the photograph of the officer in question and a terse and attractive statement of some of the principles upon which the company is trying to run its business. The *Detroit Times* of February 16, 1914, commenting editorially upon these introductions to the company's representatives commends the company's attempt to establish personal relations with its customers; and states that the scheme is a valuable lesson for other corporations. The various pages were originally published singly as newspaper advertisements.

920—Economy and Efficiency.

ATTITUDE OF CALIFORNIA COMMISSION ON HYDROELECTRIC DEVELOPMENT. *Electrical World*, 1-6 page, June 6, 1914, p. 1281.

This quotes a statement which has been made by Mr. John Hays Hammond in regard to public utility and water power development under the California commission. Mr. Hammond said in part: "As a result of my own experience, I am confident that, on the whole, such a commission is of great advantage not only to the investors in the securities of such companies and the consumers of power, but to the companies themselves. I discussed with the Railroad Commission many phases of the development of hydroelectric companies. The Commission is sincerely desirous of encouraging the development of such enterprises in the interest of the people of the State in general, and the commission absolutely repudiates the rumors that have been current that it would oppose any capitalizations of companies and any rates for energy that would make it possible for investors to earn more than 6 per cent on the investment.

It realizes that such investments must be attractive to investors, and it is willing to allow a rate of earnings attractive to the legitimate investor. Besides this, the commission has wisely established the principle that it will not encourage cut-throat competition in the industry."

149—Holding Companies.

HEARING BEFORE THE COMMITTEE ON INTERSTATE COMMERCE, UNITED STATES SENATE, ON TENTATIVE BILLS RELATING TO TRUST LEGISLATION, PART V, pp. 533-686. Pamphlet.

This senate document gives the testimony on the interstate trade bills referred to in 5 RATE RESEARCH 144. The holding company testimony covers pages 611-686.

980—Public Relations.

SAFEGUARDING THE SMALL INVESTOR, by JOHN F. GILCHRIST. *Chamberlain's*, 2½ pages, June, 1914, p. 54.

This discusses the desirability of having the citizens of any city hold stock in the city's utilities, because of the safety of the investment on the one hand, and because of the better relations brought about between the two on the other. With reference to the Chicago situation, it is said that Chicago utilities have been run more wisely and conservatively than is the case in the great majority of cities. The progressiveness of the managements of these utilities have been such in the past that rates for service are relatively low and the business of all the companies has been so extended that with hardly an exception the maximum of service is being rendered to all citizens. There has not, however, been such progress that it cannot be improved by a closer relationship between the utilities and the users of the services. This should be brought about by the citizens, to a much greater extent than now exists, through their owning interests in these utilities as their own private investments.

COURT DECISION REFERENCES.**242.1—Testimony.**

In re MENDEL. Decision of the NEW YORK SUPREME COURT, APPELLATE DIVISION, FIRST DEPARTMENT. May 15, 1914. 147 N. Y. Supp. 603.

This holds that the Public Service Commission of New York (1st D.), cannot compel a corporation running a check-room in a station to produce its books, papers, etc.

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June 24, 1914

No. 13

RATE RESEARCH



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120 WEST ADAMS STREET - - - CHICAGO

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Rate Research

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Rate Research

Vol. 5

CHICAGO, JUNE 24, 1914

No. 13

For statement of facts and opinions contained in papers abstracted herein, the Association does not hold itself responsible

RATES

FAMOUS RATE PAPERS—No. 5

A METHOD OF CALCULATING THE COST OF FURNISHING ELECTRIC CURRENT AND A WAY OF SELLING IT.

By W. J. Greene. *Electrical World*, February 29, 1896, page 222-223.

(NOTE.—Paragraph headings are not in original.)

A manager of a central station has, directly or indirectly, two objects in view—the increasing of the revenue, and the decreasing of the expenses. A thorough knowledge of the cost of supplying current, and of the rates at which it should be sold, would naturally come under the first head, and is of great importance in insuring the permanent success of a lighting plant. The experience of the writer's own company on these features, and data formulated therefrom, may prove of some interest.

In January, 1888, the company commenced the supply of current for light, using the alternating-current system. In the Fall of 1888 a few meters were installed, and in the Spring of 1889 the use of meters was adopted exclusively, except for one or two lamps. The rate charged was one cent per ampere-hour on 50-volt current, regardless of the amount consumed. Lights were added very rapidly. The stockholders were continually called upon to provide means for enlargements to the station equipment, extensions to the circuits and purchases of converters and meters. The net earnings for a time increased in proportion to the increase in investments. In 1892, however, a very apparent falling off in the net earnings in proportion to the new capital invested was noticed. It became evident that something was wrong. Tables were therefore prepared, showing the expense of maintaining an equipment necessary to supply current for consumers having from one light and upward. In comparing these results with the actual receipts from the various consumers, it was found that only 25 per cent. of residence consumers and 55 per cent. of other classes used sufficient current to furnish a paying investment. A few years prior thereto fully 85 per cent. of residence consumers and 95 per cent. of other classes were considered profitable. To find that too much business was undermining the stability of the company and jeopardizing its success was startling. It was evident that radical changes in the method of selling current must be made. Various plans, suggested by the practice of different companies, were considered, and it was finally decided to adopt the custom, more or less prevalent, of making a minimum charge;

EDITORIAL NOTE.—All indented matter is direct quotation.

the charge to be a sufficient amount to cover all expenses known to be incurred in adding a consumer. In these expenses interest on the investment and an amount to cover depreciation due to wear and tear, which would not show up in repairs during the earlier life of the plant, were included.

411—Apportionment of Expense.

To determine the least amount for which the company can afford to accept consumers it is necessary to establish how changes in the equipment, consumers, or consumption of current affect the expenses. I have made the following groups which I think are reasonably correct:

First. Expenses affected by the equipment, from real estate to meters and expressed by the relation of the maximum number of lights burned at one time during the year to the investment.

Second. Expenses affected by the number of consumers.

Third. Expenses affected by the amount of work done by engines, boilers, dynamos, etc., and shown by the output in watt-hours.

Fourth. Expenses practically unvarying, and practically independent of the size of the plant, the number of consumers or the amount of current supplied. These may be considered as the basic expenses, or the starting point at which expenses begin to increase more or less in proportion to any increase in the size of the plant, the number of consumers, or the amount of current generated. They are necessarily estimated expenses, and cover the cost of running the station with a unit suitable to provide for the day load, supplying current to the switchboard only. The company must depend on long-hour consumers to furnish necessary revenue to meet these expenses. This fourth group is divided into three classes—those dependent on capital invested in the day unit, those dependent on the management of such a unit without any consumers, and those dependent on the power necessary to maintain the potential at the switchboard.

Fifth. Expenses affected by the size of the meter required by the individual consumer. The meters are treated separately, because the size of the meters are not always proportional to the number of lamps installed.

The first group comprises, in our classification of accounts, such expenses as total charges, exclusive of meters, for interest, depreciation, taxes, insurance, engineers and helpers, building repairs, switchboard repairs, station wiring repairs, tool and instrument repairs, circuit repairs, converter repairs, and service line repairs.

The second group comprises total charges for management, clerical service, stationery and printing, general expenses, petty repairs, rents, office heating and lighting, furniture and fixture repairs and reading meters.

The third group comprises total charges for water, fuel, firemen and helpers, oil and waste, boiler compounds, boiler repairs, pump repairs, breeching repairs, piping repairs, engine repairs, shafting and pulley repairs, belting repairs and dynamo repairs.

The fourth group comprises:

First. Two engineers at nominal wages, interest, depreciation, taxes, insurance, building repairs, switchboard repairs, station wiring repairs and tools and instruments repairs, on the capital invested in the smallest unit suitable for supplying current for the day load.

Second. An estimated amount from charges in the second group, and intended to be an amount below which it might be considered such expenses could not be reduced, even if the plant were operated without a consumer.

Third. Two firemen, water, fuel, oil and waste, boiler compound, boiler repairs, pump repairs, breeching repairs, engine repairs, shafting and pulley repairs, belting repairs and dynamo repairs, necessary to keep the potential at the switchboard when running the smallest unit 24 hours per day.

The fifth group comprises: Interest, depreciation, taxes, insurance and repairs on meters, figured on the size of meter necessary for any desired number of lamps.

410—Cost of Service.

For simplicity, the following letters are used to represent the factors employed in these calculations:

F = the first group.

C = the second group.

W = the third group.

f = the first division under the fourth group.

c = the second division under the fourth group.

w = the third division under the fourth group.

M = the fifth group.

L = the maximum number of 16-cp lamps burned at one time during the year.

l = the number of lamps in any consumer's installation for which the cost is desired.

e = the energy consumed per 16-cp lamp in watts.

N = the number of consumers.

T = the total annual output in kw-hours measured at station switchboard.

P = the percentage of T lost in converter and line leakage.

$1-P$ = the percentage of T used by consumers and lost in transmission, except that due to converter and line leakage, as provided for in P .

V = the efficiency of transmission, being the loss in conductors and converters, due to current used by consumers.

$VT(1-P)$ = the amount of current registered by consumers' meters.

X = the minimum cost for which current can be supplied for l lamps.

Y = the cost of l lamps, above which the company can afford to make concessions.

Then:

$$(1) \quad \frac{l(F-f)}{L} = \text{the annual cost of the } F-f \text{ expenses for an installation of } l \text{ lamps.}$$

$$(2) \quad \frac{lP(W-w)}{L} = \text{the annual cost of the } W-w \text{ expenses for an installation of } l \text{ lamps.}$$

$$(3) \quad \frac{C-c}{N} = \text{the cost of the } C-c \text{ expenses per consumer.}$$

(4) $\frac{L(F-f)}{L} + \frac{l P (W-w)}{L} + \frac{C-c}{N} + M =$ The least annual amount for which a company can afford to accept a consumer, if he uses no current at all. To this amount must be added the cost of the $W-w$ expenses for a quantity of current, which at one cent per ampere-hour will equal the (4) expenses plus the $W-w$ expenses for the above quantity of current. This is found by dividing (4) by one minus the $W-w$ expenses per ampere-hour.

(5) $\frac{(W-w \times (l-P))}{VT \times (l-P) e} =$ the $(W-w)$ expenses per lamp-hour, expressed in decimals of one cent.

Hence:

$$(6) \quad X = \frac{\frac{l(F-f) + l P (W-w)}{L} + \frac{C-c}{N} + M}{1 - \frac{(W-w) e}{TV}}$$

For residence lighting I give l a value of 3 for 5 lamps, 4 for 10 lamps, 5 for 15 lamps, 6 for 20 lamps, etc.; because, if such a consumer wishes to have provision made for a maximum of say, 20 lights, there would seldom be over six in use at one time unless an entertainment were taking place, in which case other places could be counted on to cut off enough lamps to make up for the difference between the estimated maximum and the agreed maximum. For the value of Y , I add to the interest account an allowance for profits, and to the depreciation account an allowance to provide for depreciation, due to the dropping in value of apparatus and improvements in the same, which may necessitate a remodeling of a plant before the original machinery is worn out. The estimated expenses of f , c and w are made zero and thus all expenses are provided for. A factor Z is introduced to allow for the following:

If the maximum load would average, say four hours each and every day, the allowance would not be necessary, because every light contracted for as a burning light, could then be relied upon to earn sufficient to pay its proportion of all expenses. The minimum charge could then be made the same as the charge above from which discounts could be made. Few plants, however, can show a four-hour maximum peak, and the conditions of operation must be met by dividing the expenses not included in the minimum charge, among the longer hour consumers. I endeavor to accomplish this and arrive at the value of Z by dividing the average maximum four-hour load in December by the average maximum four-hour load in July.

Hence:

$$(7) \quad Y = Z \left\{ \frac{\frac{l F + l P W}{L} + \frac{C}{N} + M}{1 - \frac{W e}{TV}} \right\}$$

For a direct current plant, P would be so small that the W expenses in the numerator could be omitted in the expressions for both X and Y . By putting the proper expense account under F , C and W , and letting l and L refer to arc lamps or motors, rated in watts or horse-power, the formula would be equally applicable to arc light or power service. e would be energy in watts per arc lamp, or watts allowed per unit adopted in motor service.

The above reasoning or formulas may not be absolutely without error or faultless, but I believe that they are, on the whole, fairly correct, and the information to be obtained therefrom I find very valuable, especially in competing for long-hour consumers. Data from various stations, showing the expenses per lamp, made up of expenses that vary with the number of burning lamps; the expenses per consumer, made up of expenses that vary with the number of consumers; the expenses per kilowatt-hour, made up of expenses that vary with the station output; and the percentage of the output lost in converter and line leakage, would surely be as beneficial to managers as the collection of data showing the watts per pound of coal.

Tables made showing the values of X for different installations of l lamps, give the minimum charge; and similar tables for Y give the charges above which a company can afford to make concessions.

500—Rate Practice.

The following, from our form of contract, will give the method of selling current adopted by our company:

First is a statement showing the number and size of lamps:

(1) "Of which the subscriber agrees to burn not more than _____ lamps of 16 candle-power, or equivalent at any one time.

(2) "The subscriber agrees to use current during the term of _____ year from the time connection is made, and pay therefor on or before the 10th day of each month at the rate of one cent per ampere-hour on 50-volt current, or two cents per ampere-hour on 100-volt current, as may be shown by statement of the meter.

(3) "The subscriber further agrees that the minimum amount to be paid for current, and the use of the company's apparatus, other than a meter of the ordinary size, under this application and contract, shall be \$_____ per year, averaging \$_____ per month, and the company may at its option, render and collect the minimum bill each month, in which case, during those months of the year when more light is required and consumed by him than the minimum bill, the subscriber will be credited upon his monthly bills by such an amount as will equalize any sum paid in excess of the amount computed from the meter reading, providing, however, that he has paid the minimum amount of this contract pro-rated up to such a date."

For consumers who are entitled to concessions, the following is submitted for the third clause:

"In consideration of the reduced rates herein provided, the subscriber hereby agrees that the minimum amount to be paid for current in any month shall bedollars.

"The company agrees to make discounts on bills paid before the 10th day of each month as follows:

On bill of	2	times	minimum	bill,	5	per	cent.
" " "	3	"	"	"	10	"	"
" " "	4	"	"	"	15	"	"
" " "	5	"	"	"	20	"	"
" " "	6	"	"	"	25	"	"
" " "	8	"	"	"	30	"	"
" " "	10	"	"	"	35	"	"

"The minimum charge in the above case is based on 60 cents per lamp for the first five lamps of 16-cp or equivalent, and on 30 cents per lamp for each additional lamp of 16-cp or equivalent."

Of course, this method is not as popular with short-hour consumers as the plan of charging a fixed rate per unit, regardless of consumption; but the plan is, without question, more equitable and just to all concerned. All pay the increased expenses they cause, and in this way the long-hour consumers are not made to pay for the losses otherwise caused by the short-hour consumers. It is also possible to make concessions without encountering the dangers to be met with in discounting all bills of a certain amount or over, as where all bills of, say, \$10 per month, or over, are discounted, a consumer having 100 lights and a bill of only \$10 per month will get a discount, whereas he should have created a bill of from \$20 to \$30 per month, before he had reimbursed the company for expenses actually incurred in order to provide him with light subject to his voluntary use.

The introduction of the minimum charge has checked the rapid rank growth which was bearing little fruit for the stockholders, and has given in its place a healthy and satisfactory increase in the company's business. About one person in one hundred will refuse to use the light, because he objects to the minimum charges, *on principle*. He thinks he is being compelled to pay something for nothing. A just and reasonable man, however, will soon see the fallacy of that argument. None will connect unless they either expect to use in excess of the minimum charge, or consider the light has sufficient value to make it worth the amount of the charge. A net increase of about 2,000 lights, a decrease, with the above lamps added, of about 200 lights in the maximum station load, and a very satisfactory increase in the gross and net revenues have been made since the adoption of the minimum charge.

COMMISSION DECISIONS

NEW JERSEY

224.5—Rates Fixed by Contract.

WILDWOOD WATER WORKS COMPANY, Application of Rates to the Borough or North Wildwood. Decision of the NEW JERSEY BOARD OF

PUBLIC UTILITY COMMISSIONERS, Holding that Contract Between the Borough and the Company Does Not Prevent the Application of Rates Approved by the Board. March 24, 1914.

The city of Wildwood opposed the adoption of a new schedule of rates filed by the water works company for service throughout Five Mile Beach. The Board stated that it was desirable to have a schedule of uniform rates throughout this community. The Borough of North Wildwood contended that rates for service in the borough were fixed by contract. It was found that the contract referred to had been superseded by a later contract which omitted all mention of rates to private consumers, and it was ordered that the rates be put in effect as approved by the Board.

The Board discusses the question of its power over rates fixed by contract as follows:

The borough maintains that inasmuch as there exists a contract between the borough and the water company regarding the minimum and base rates to be charged consumers in the borough of North Wildwood, this Board is without authority to order the filing of a schedule providing rates in excess of the maximum rates allowed in said contract.

The Board does not assent to this limitation of its powers either to fix rates or regulate service. Since the passage of the acts creating this Board and defining its powers, the power of municipalities to impose conditions upon public utilities in the exercise of franchise grants, and to provide by contract respecting rates and service, is subject to the authority and control of this Board to fix rates and regulate service. As was said by the Board in the case of Borough of Butler v. Butler Water Company (p. 12):

"The contention is based upon the terms of ordinance No. 15, dated January 3, 1905, under which the company is operating. We are not put to the necessity of determining the soundness of this contention. In our judgment the provisions of this ordinance cannot stand in the way of the exercise by the Board of its power to fix just and reasonable rates; to set standards of adequate and proper service, and to establish just and reasonable practices, rules and regulation.

"In so far as the action of this Board in the exercise of these powers contravenes the terms of the ordinance, the ordinance provisions must give way.

"The municipality in imposing the terms contained in the ordinance simply acted as an agency of the State. The Legislature might directly abrogate, modify or alter, so far as the municipality is concerned, the terms imposed by the municipality. While the Legislature has not done this directly, yet it has by the creation of this Board with the power stated, constituted a body whose orders in fixing just and reasonable rates, setting standards of adequate and proper service and establishing just and reasonable practices, rules and regulations may indirectly have that result."

This view is supported by recent decisions of the New Jersey Supreme Court in several cases.

The State, Inhabitants of Phillipsburg et al. v. Board of Public Utility Commissioners et al (November Term, 1913).

Public Service Railway Company v. Board of Public Utility Commissioners et al. (November Term, 1913).

See, also,

Manitowoc v. Manitowoc & Northern Traction Company, 145 Wis. 13.

La Crosse v. La Crosse Gas & Electric Co., 145 Wis. 408.

Milwaukee Electric Railway & Light Co. v. Railroad Commission, 153 Wis. 592.

State ex rel. v. Superior Court, 67 Wash. 49-51.

While this Board has the power to fix rates and establish rules and practices governing service without regard to ordinance provisions or contracts between municipalities and utilities, we would not feel disposed to exercise such power to relieve a utility from the burden assumed by such ordinance or contract in any case where it appeared that a municipality or its inhabitants would under such ordinance or contract receive rates or service more advantageous than this Board would be justified in ordering, unless it appeared that such ordinance or contract imposed terms involving such loss and hardship as to make it impossible for the company to render safe, adequate and proper service. A company may agree to give rates and service upon terms that will not accord to its stockholders a fair return upon the capital invested. We would not be disposed to permit an increase of rates in any case where an agreement between a municipality and a utility exists, if the only benefit from such increase of rates is an increase of dividends. In such case the company would be presumed to have acted with a knowledge that its earnings would be reduced by such terms and to be willing to wait for adequate returns upon the investment. When, however, the effect of ordinance or agreement provisions is to impair service, such provisions will not be permitted to stand in the way of such order as this Board deems necessary.

COURT DECISIONS

WEST VIRGINIA

100—Public Service.

WINGROVE ET AL V. PUBLIC SERVICE COMMISSION ET AL. Suit Holding that a Mining Corporation, Incidentally Furnishing Electric Service is not a Public Utility. Decision of the SUPREME COURT OF APPEALS OF WEST VIRGINIA, Adjudging that the Company is a Public Utility Under the Terms of the Law. April 21, 1914. 81 Southwestern 734. The plaintiffs in this case petitioned the Public Service Commission

of West Virginia to compel the White Oak Fuel Company (an industrial concern manufacturing electricity for power purposes, and incidentally furnishing it for light to its employes and various other persons) to furnish service to them. The commission held that it had no jurisdiction, since the Company was not a public utility under the terms of the West Virginia public utilities law.

That the electrical power plant is operated primarily as a part of the mining enterprise, and was not installed as a public service agency, is clear and indisputable. Its chief function is to supply power for running the motors, pumps, fans, and other mining machinery, and light to the stores and offices maintained as part of the enterprise. Upon the facts and circumstances disclosed, it could, no doubt, be safely said the company would never have installed its plant for lighting service only, and would not now operate it for that purpose alone. Nevertheless its rendition of public service, incidental and for accommodation rather than profit though it may be, is equally obvious. If for accommodation, it is not gratuitous. Compensation is charged and paid, a considerable income derived, and the business is conducted in much the same manner as if the plant were maintained and run primarily for public service. Citizens not in any way connected with the company apply to it for the service; the wiring of their buildings and fixtures and all these demands have been complied with, except in three instances . . .

There is no denial of the ability of the company to furnish these parties light. It stands upon a claim of right to withhold its service from any person, on the ground that it is not engaged in the public service, and its charter does not authorize it to do public service business.

The lighting portion of this company's business falls within the letter of the statute conferring jurisdiction and power upon the public service commission. Its jurisdiction includes "gas companies, electric lighting companies and municipalities furnishing gas or electricity for lighting, heating or power purposes." Chapter 150, Code of 1913, sec. 3 (638). In the same section public service corporations are defined for the purposes of the act, in the following terms: "The words 'public service corporation' used in this act shall include all persons, association of persons, firms, corporations, municipalities and agencies engaged or employed in any business herein enumerated, or in any other public service business whether above enumerated or not, whether incorporated or not" This being true, no ground is perceived upon which it can be said to have been impliedly excepted from such jurisdiction. . . .

Its lack of the power of eminent domain is a mere inconclusive circumstance. Many persons and firms engaged in the public service do not have it. If concerns engaged exclusively in water, light, and gas service did not possess it, they would clearly be public service concerns nevertheless. Many common carriers are without power to exercise this high right. Acceptance of practically all applica-

tions for service, made by citizens of the town, is a sufficient election to engage in the business and manifestation thereof, without advertisement of the fact or solicitation of customers.

Acquisition and retention of its patronage by the company constitute an occupation of a certain field in the public service, into which no other concern or person can safely enter. While it has not formally or in terms kept any one else out, others may be barred out by such occupancy. Nor can it be material that the company reserves the right to discontinue the service at any time, or has guarded against obligation on its part to continue it indefinitely or at all. It is now devoting its property in part to a public function, and, in so doing, has subjected it to governmental regulation and control for the time being. "When private property is devoted to public use, it is subject to public regulation." *Munn v. Illinois*, 94 U. S. 113, 24 L. Ed. 77; *Gas Co. v. Lowe and Butler*, 52 W. Va. 662, 671, 44 S. E. 410. Its lack of charter authorization or contemplation can not be set up as a defense. It cannot plead its want of power while persisting in the alleged ultra vires act. . . .

244—Rehearings and Appeal.

The court, in discussing the character of the order to be entered in the case, holds that, since the statute is very indefinite on the subject, the legislature left it in the power of the court to select the appropriate writ and award it against the person.

Under these principles and conclusions, the order of the public service commission complained of will be suspended, and a pre-emptory writ of mandamus awarded, commanding the White Oak Fuel Company forthwith to connect its lighting service wires with the wires in the houses of the petitioners Wingrove and Doliff, in the proceedings mentioned, on their compliance with the conditions prescribed for other patrons similarly situated, and furnished them and each of them electricity from its electrical plant upon the terms and conditions prescribed for other persons similarly situated. . . .

REFERENCES

RATES

410—Cost of the Service.

SHALL COST OR VALUE OF PUBLIC UTILITY SERVICE BE THE BASIS OF RATES? *Engineering News*, 2 pages, June 18, 1914, p. 1372.

This takes issue with the conclusions propounded by the Rate Research Committee in its annual report (See 5 RATE RESEARCH 171), on the grounds that adjustment of rates on the cost of service basis is in greater demand than adjustment according to value of service, and is more tangible and definite. It is said that it is easier to approximate reasonably the cost of serving this or that customer in very many cases than to quantitatively fix value or service to each, for in the former case there are wholly tangible and definite data to start off with. It requires good judgment still, but the adjusters are anchored to a considerable extent. The report in question shows how the values may vary in general, but it is evident

that the application of these general principles to specific cases calls for a high degree of skill, a complete knowledge of local industrial and social conditions and, with these, rare good judgment. These form a combination too much to expect in a very large number of cases. If it be a state commission making these adjustments, the geographical breadth of its work may prevent the desirable intimate knowledge of local matters though the members of the commission may have skill and judgment. Local municipal commissions can be no more successful because of other limitations. An outline is given of a suggested grouping of cost data into fixed, operating and customer charges. It is said that while there may never be entire agreement with regard to such an allocation, the point is that this or some modified schedule can be made which the tariff adjuster can follow easier than he can weigh values. The statement is made that admittedly in following a cost-of-service basis as closely as possible, complete mathematical accuracy is out of question; judgment must still be used and the division of items must be influenced by opinion. However, the debatable items would not form probably more than 25% of the total under each part of the basis for any class rate. It is said that the great utility of the value-of-service theory lies in deciding how much of the fixed charges can be borne by the nonpeak consumers. It is pointed out that whatever form is given to the results of a cost-of-service tariff adjustment, those responsible for it may rest easy in their ability to display tangible fundamental data, to demonstrate operations of an accuracy consistent with that of the data, and yet to give proper consideration to the play of economic values.

600—Rate Differentials.

RATES. *Southwestern Electrician*, 1½ pages, June, 1914, p. 16.

This discusses various points in regard to rate making. Of rate differentials, it is said that a properly applied "difference in rates" to consumers of different "classes of use" is not only of profit to the utility but that a proper "schedule of rates" based on this idea, always has a tendency to allow the utility to lower the rate to the consumers as a whole or to such "classes" of them as are equitably entitled to a reduction. This matter is not fully comprehended nor appreciated by many of the medium and smaller public utilities—whose need in such matters is often greater than the larger ones—and it is not comprehended at all by the large majority of the consumers or by the public at large. In this matter the public is not to blame if it has not been voluntarily properly enlightened and educated by the utility. It gets ample voluntary mis-education and un-enlightenment from those inimical to the utility. The need of valuation and determination of fair return in rate-making is referred to. It is said that there are, actually, only two or three allowable differences between "public-utilities" and private businesses that should make any difference between a "valuation" of the property of either or that should be allowed to affect their profits. These are: the matter of "good-will", the matter of an assured determinate length of "franchise" or "charter", and the allied matter of the so-called "local monopoly of supply." It is held that as long as there is only one public utility, of a particular kind, allowed by franchise in any one community or locality, it is evident that it can not claim any value for its "good-will"; but that the utility should be compensated for the risk involved in "franchise length of life"; and should not be valued at a less amount because it has a monopoly in the field it serves.

224.5—Rates Fixed by Contract.

CONTRACT AND FRANCHISE RATES AS AFFECTED BY THE PUBLIC SERVICE COMMISSION LAWS, by JAMES V. OXTOPY. Presented at the Third Annual Convention of the Michigan Section of the N. E. L. A., June 17-20, 1914, 14 pages.

This is a consummate review of the more important court and commission decisions on this point. The conclusions drawn are as follows: (1) All contracts entered into between a public utility and its customers are subject to cancellation or revision by a Public Service Commission, exercising the public power of the State.

(2) A public utility cannot by its conduct or course of dealing waive its obligations to properly perform its duties, or bind itself to continue in force rates or practices which are unreasonable or discriminative. (3) Rates named in contracts entered into prior to the enactment of Act No. 106, P. A., 1909 (authorizing the Michigan Railroad Commission to fix electric rates) are cancelled upon the filing by the utility of its rate schedules as required by the orders of the Michigan Railroad Commission, when such schedules fix a new and different rate for the service. (4) Rates fixed by contract between a public utility and its customers are binding only so long as they are in accordance with the utility's published schedule of rates. When a rate is filed and published as required by law it becomes the legal rate to be charged thereafter, notwithstanding the existence of outstanding contracts, which contracts are thereby modified to that extent. (5) Rates fixed by a franchise are binding as between the municipality and the public utility. Whether or not such rates are subject to change directly or indirectly by legislative authority, where express power is conferred upon the municipality to agree upon rates, is open to question. The courts have not settled the question whether the legislature, under its "reserve power", has the right to alter, amend or repeal such franchises as it has expressly authorized. The courts have generally been content to hold that the power conferred upon the municipality to agree upon the rate was not absolute, and therefore the rate was subject to change. (6) Rates fixed by franchise may not be changed by the public utility alone, such as by its filing a new schedule of rates with the Commission. A franchise rate (if subject to change at all) may be changed only by the legislature, or by a Public Service Commission after a hearing. In Michigan electric rates fixed by franchises are not affected by the provisions of the Electric Public Utility Law, (Act No. 106 P. A., 1909). (7) Provisions in city charters recently adopted in Michigan under the Home Rule Act, undertaking to empower the city to regulate rates of electric utilities, are void as in conflict with the provisions of the general law giving the Railroad Commission jurisdiction of the subject matter.

610—Character of Service.

ELECTRIC COFFEE MILLS. *Daily Consular and Trade Reports*, 4 pages, June 17, 1914, p. 1642.

This contains information concerning the extent to which electric coffee mills are used in the following cities: Havre, France; Athens, Greece; Birmingham, England; Liverpool, England; Dublin, Ireland, and Rosario, Argentina. There is a discussion of the extent of the general use of electricity in these cities; and a statement of the rates at which current is available for coffee mills.

450—Value of Service Theory.

THE COMMERCIAL DEVELOPMENT OF ELECTRICITY SUPPLY IN MODERATE SIZED TOWNS, by W. A. VIGNOLES. Read Before the Incorporated Municipal Electrical Association, Birmingham, England, June 15-20, 52 pages.

This treats of the problems to be met with in the supply of electricity in towns of about 100,000 inhabitants. Part 1 deals with the question of promotion and growth of the business; part 2, with the question of financial control; and part 3, with cost of service. Part 3 considers the allocation of costs, and shows curves for the operating costs, management costs, and distribution costs of the Grimsby undertaking, of which the writer is Chief Electrical Engineer. With reference to the selling of electricity not on the basis of cost but on what it will bring in the market, it is said that this should not be done if it involves selling below what it costs, unless: (1) it can be shown that selling at the proposed price will so reduce costs that ultimately a profit will be made; or (2) that, by selling at a loss, other business, which would not otherwise be done, can be obtained upon which the losses can be made up. It is said that this proposition is not preliminary to an attempt to show that the energetic band known as the "Point Fives" are selling at too low a price; on the contrary it will be seen that electricity can be sold at their rates of charge with great advantage to most undertakings.

INVESTMENT AND RETURN

360—Depreciation.

RESERVES FOR DEPRECIATION, by H. A. FEE. Presented before the Third Annual Convention of the Michigan Section of the N. E. L. A., June 17-20, 1914. 15 pages.

This comments on the fact that in the state of Michigan there are no definite rules for procedure in taking care of future losses; and urges the necessity of at once adopting a definite and comprehensive policy in the accumulating of funds to take care of deferred depreciation, and of evolving a method that will be at once a protection to the investors and to the public. The various forms in which depreciation appears are outlined as follows: cumulative depreciation; inadequacy; obsolescence; disaster; and franchise loss. It is pointed out that the burden falling upon rate-payers, because of the need to provide against expiration of franchise, is an entirely unnecessary cost, and would be obviated were an indeterminate law, like that of Wisconsin, passed in Michigan. There is a discussion of the usual methods of creating depreciation funds, and of the advantages and disadvantages of each. It is said that the simplest method is a combination of the straight line and sinking fund methods under which 1/12 of the annual depreciation, as calculated on the straight line method, is set aside each month and the funds so accumulated are then handled so as to yield the greatest earnings possible with safety. There is a consideration of the question of the investment of reserve funds.

310—Valuation.

VALUATION OF PUBLIC UTILITIES, by NICHOLAS S. HILL. Presented before the Municipal Engineers of the City of New York, March 25, 1914. 34 pages.

This states that the avoidance of personal preference for methods and adherence to fundamentals is the most direct avenue to common agreement in regard to matters of valuation. It is said that the science of valuation, through the accretion of theories, has been developed into a most complicated one, with advocates of one or another theory advancing each his own with more or less dogmatic intolerance. A complex terminology has come into vogue, which has not been standardized and is, therefore, more or less confusing even among experts. Fair value is defined, and the question of methods to be used in determining it discussed. The distinction between the elements of fair value which constitute physical value and those composing the intangible value is pointed out. It is said that the elements which should be considered in determining the physical value are: Promotion and preliminary cost, organization costs, discount on bonds, interest and taxes during construction, working capital, investment in physical plant and extension costs. There follows a discussion of each of these elements; of intangible value; of the methods for determining fair value; of what a fair rate of return shall cover; of the attitude of the Commissions and Courts in the matter of rate of return; and of the ordinary method of capitalizing corporations and its relation to the fair rate of return.

373—City Profit Sharing.

CHICAGO'S FIFTY-FIVE PER CENT. *Weber's Weekly*, 4 pages, June 20, 1914.

This discusses the arrangement whereby the City of Chicago gets 55 per cent of the surface traction profits. It is held that this profit, instead of going into the city's treasury, should be put into improvements and betterments and hence benefit the fare-payer. It is said that the 55 per cent "net profit" share is nothing more nor less than a toll tax on the passenger who pays by being forced to submit to inadequate service. The first consideration is that the best service that a

nickel will buy be given to the fare-payer. After that the balance properly belongs to the investors, because the City has already been compensated for all that it supplies in traction service—the privilege to use the streets—by the excessive taxes paid on capital stock of the Companies, and the large sums paid by the Companies for paving, cleaning, sprinkling and repairing the spaces used in the streets used by them. The City has no risk of loss; the investor takes chances, and, as he risks loss, he is entitled to possible gain. The entire scheme of the City's participation in the "net profits" of the Companies is inherently bad. It has no authorization in law or ethics. And it has worked out badly because it has made City administrations participate in economies in street railway service so that the City and Companies might both profit by inadequate service for fare-payers. And good service is the very first requirement of the law.

PUBLIC SERVICE REGULATION

200—Public Service Regulation.

PUBLIC UTILITY DOCTORS IN DISAGREEMENT. *Stone and Webster*, 5½ pages, June, 1914, p. 400.

This quotes the chief points made by the Minnesota Home Rule league in its recent pamphlet on the regulation of public utilities in Wisconsin (See 5 RATE RESEARCH 92). It is pointed out that the common opinion has been that the Wisconsin Railroad Commission was composed of men of high intelligence and great public spirit and that it had, from the start, taken its task with the utmost seriousness and was, above all things, intent on meting out exact justice to all conflicting interests. It has been a model for other public service commissions, and its opinions have been accorded the highest respect by the courts in all parts of the United States. It is said that as the personal character of the members of the Wisconsin Railroad Commission has been accorded the high approval of the Minnesota Home Rule League, it cannot be charged that its alleged one-sidedness has been due to any moral defect. Consequently if it exists at all, it must be due to an insufficient investigation of the problems with which it has dealt and a lack of intellectual ability in dealing with these problems. It is said that the real trouble may be that it has investigated too thoroughly and used too much intellectual ability in forming its opinions. Apparently it has not been sufficiently a priori. Its methods have been extremely judicial; it appears to have been ready to listen as patiently to the defendant as to the plaintiff.

COURT DECISION REFERENCES.

112—Franchises.

EAST BOYER TELEPHONE CO. VS. INCORPORATED TOWN OF VAIL. Decision of the SUPREME COURT OF IOWA. May 16, 1914. 147 Northwestern 327.

The Company in this case, after having been granted permission by a resolution of the town council to run its telephone lines into the town "by meeting with the requirements of the state, also Town of Vail laws regulating telephone companies running lines into town," was refused a franchise by the voters at a succeeding special election. The company proceeded to run its lines into the town, claiming a right under the resolution passed by the town council. The court holds that the company has no right to occupy the streets.

Assuming, as we must, under the rule heretofore announced in this case, and in the *Washta Case* [133 N. W. 361], that affirmative action of the voters was necessary before a franchise could be granted under sections 775 and 776 of the Code, the action of the town council was no more than a declaration that upon securing such consent of the voters the privilege might be exercised.

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Rate Research

Vol. 5

CHICAGO, JULY 1, 1914

No. 14

For statement of facts and opinions contained in papers abstracted herein, the Association does not hold itself responsible

COMMISSION DECISIONS

MISSOURI

300—Investment and Return.

COMPLAINT V. SPRINGFIELD GAS AND ELECTRIC COMPANY, Alleging that the Company's Rates for Electric Service Are Unjust and Unreasonable. Decision of the MISSOURI PUBLIC SERVICE COMMISSION, Fixing Rates. June 23, 1914.

The opinion sets forth the corporate and financial history of the predecessors of the Springfield Gas and Electric Company, beginning with the organization of the Springfield Gas Lighting Company in 1875, and following the various consolidations with other companies up to the organization of the Springfield Traction Company and the Springfield Gas and Electric Company, defendants in this case. All the stock of these companies is owned by the Springfield Railway and Light Company, a holding company of Maine, and all of the latter company's stock is in turn owned by the Federal Light and Traction Company, a holding company of New York.

In February, 1913, an agreement was made between the Springfield Railway and Light Company, the Maine holding corporation, and the Springfield Gas and Electric Company and Springfield Traction Company, transferring the steam power plant to the Gas and Electric Company for the consideration of \$388,416. This consideration was paid by certain entries on the books of the companies. Later the valuation of the steam plant was increased and a further book entry was made against the Springfield Gas and Electric Company, making the total consideration amount to \$414,526 and thus supplying a conveniently large basis for the calculation of light rates. The Commission holds that this attempted transfer was a palpable attempt to transfer a useless power plant from the unprofitable traction company and unload it upon the prosperous Gas and Electric Company and thus have its value amortized out of the earnings of the more prosperous company. And the Commission holds that the attempted transfer and sale while the rate matter was pending was a fraud upon the public and therefor void. In the subsequent consideration of the case this power plant is treated as the property of the Traction Company.

EDITORIAL NOTE.—All indented matter is direct quotation.

149—Holding Companies.

In considering the salaries and commissions paid the Federal Company the opinion states:

"We think because of this situation [control by Federal Company through Railway Company of Maine] and the very human tendency of corporate greed of some holding companies to 'milk' the earnings of its subsidiary companies through 'dummy' directors, that it is the duty of this Commission to strictly limit the amount of any such charges which shall be only for the services rendered by such holding company to the lowest reasonable charge for the services actually rendered. * * * The public at Springfield is paying the salaries of a competent manager and a competent secretary of defendant companies who reside at Springfield, and we do not think that the public should be called upon to pay any other 'managerial services' or management by 'long distance' from the New York office of the holding company in this case. No charge should be allowed for commissions, except for services actually rendered to the company, and that at no higher cost than the local company could employ the services of a competent independent engineer, provided that the manager in charge is not able and competent to render such service to the company himself. * * * We disallow any charge whatever for 'managerial services.' "

Open, fair, arm's length dealings, one with the other, is stated to be better in the end for interrelated corporations. The deduction of salaries and commissions takes \$18,000 annually from operating expenses.

310—Valuation.

Evidence was introduced at the hearing to the effect that an up-to-date distributing system could be built at Springfield for the cost of \$151,266. It was noted also that the assessed value of the entire property of the Gas and Electric Company for 1911, was \$150,000, inclusive of the gas department. It was found that stock to the amount of \$500,000 and bonus to the amount of \$277,000 were issued on property for which the secretary of the company testified \$300,000 was paid. The assets of the Gas and Electric Company as shown by the books are \$865,718.89 for the electric department. It was observed that no deductions for superseded property had ever been made by the company, and that except for an item of \$5,666.13, no depreciation had been deducted during twenty-nine years; and further that \$60,000 is included as franchise values of the gas and electric property. The Commission arrives at the conclusion that \$270,000 is the corrected original cost of the electric department of the company, holding the amount for which the plant was transferred upon the books of the company, \$414,526, to be entirely too large.

312.8—Discarded Property.

In view of the fact that the Springfield Gas and Electric Company and the Springfield Traction Company have a contract with the Ozark Power and Water Company, calling for the furnishing of electric energy to the Springfield companies, and a supplementary agreement whereby the Ozark Company agrees to furnish break down service from the Empire District Electric Company, complainants contention that no necessity exists for an auxiliary steam plant at Springfield is upheld, the evidence failing to convince the Commission that any part of the steam plant at Springfield is used or useful for the public, and it is not taken into consideration in allowing a valuation upon which the return is to be based.

315.1—Going Value.

Defendant companies claimed that the business had a distinct "going value" of between \$60,000 and \$137,900—based upon the earnings of the present plant. The Commission holds that a distinction is to be made in the valuation of the properties of public utilities for the purpose of sale or condemnation, which is known as exchange value, and a valuation for rate making purposes. No proof was offered tending to show that the company suffered early losses, but the record disclosed much evidence indicating that the early losses, if any, have long since been recouped through excessive rates, and that the alleged earnings have been from the electric department and the losses, if any, from the gas and street railway department. It is the duty of the company to show by competent proof that losses have been incurred, and applying the distinction between sale and condemnation cases and rate making cases no separate and distinct item for going value is allowed in this case, but the Commission takes "into account the fact that the plant was in successful operation" in fixing the fair value for rate making purposes.

340—Rate of Return.

The Commission in arriving at the rate of return to be allowed states that six per cent is the legal rate of interest in this State and by contract the rate may not exceed eight per cent; holding that seven per cent is a just net return on property invested in public utilities. The rate of return must be determined from the facts of each case.

360—Depreciation.

Under the provisions of the Public Service Commission Law, the Commission is empowered to determine what amount shall be set aside to cover depreciation. The public utility is entitled to earn a sufficient sum to provide not only for current repairs but to make good the depreciation and replacing of parts when they come to an end in their usefulness. For this purpose the Commission makes an allowance of five per cent of the present fair value of the property.

The opinion also states that the citizens of Springfield are entitled to good and adequate electric service and to receive the benefits of their natural location, if any there be, and should partake of the advantages in the reduction of the cost of hydro-electric energy.

On the basis of previous earnings and expenses, the gross earnings of the company for 1913 was determined as \$183,909 and operating expenses as \$80,000.

In conclusion, the Commission finds as a fact that the fair present value for determining reasonable and just rates in this case of all of the property of the electrical department of defendant Gas and Electric Company, as of date September 30, 1913, is the sum of \$300,000, which sum formed the basis for determining reasonable and just rates. The Commission found the rates, as a matter of fact, of the Springfield Gas and Electric Company for electric energy to be unjust and unreasonable; the schedule of rates in force to be unjustly discriminatory and unduly preferential, and that rates should be fixed upon a sliding scale with maximum prices for the various amounts of electric energy furnished to customers. For the purpose of classification, consumers are divided into four classes: (1) residence lighting; (2) general lighting; (3) general power; and (4) large light and power. Other classes or subdivisions of the above classes are reserved for future action should the occasion arise.

The Commission found that the operating revenue for 1913 was estimated at \$185,900; operating expenses, allowance for contingencies and depreciation and return on investment as corrected, \$116,000, which justifies a reduction of thirty-seven per cent below the 1913 revenue.

Analysis of consumers' bills for September, 1913, discloses an average rate of \$.0969 per kilowatt hour—an average power rate of \$.055 and an arc lamp rate of \$.058.

720—Rate Schedules.

The rates prescribed are the maximum rates permitted, and are to be in force for a period of three years from July 1, 1914, and thereafter until changed or abrogated by the Commission.

RESIDENCE LIGHTING.

Available for actual residence consumers only.

Rate.

- 8 cents per kilowatt-hour for the first thirty hours use of the maximum demand.
- 5 cents per kilowatt-hour for all excess use.

Determination of Demand.

Maximum demand is assumed to be one half of the connected load.

Prompt Payment Discount.

10 per cent on all bills paid before the 10th of the month.

Minimum Charge.

75 cents per month per meter.

GENERAL LIGHTING.

Available for all lighting except residence consumers.

Rate.

- 8 cents per kilowatt-hour for the first thirty hours' use of the maximum demand.
- 5 cents per kilowatt-hour for the next sixty hours' use of the maximum demand.
- 3½ cents per kilowatt-hour for all excess use.

Determination of Demand.

Maximum demand is assumed to be three-fourths of connected load.

Prompt Payment Discount.

10 per cent on all bills paid before the 10th of the month.

Minimum Charge.

5 cents per month for each 60 watt or equivalent, connected, with no charge less than \$1.00.

GENERAL POWER.

Available to all power consumers.

Rate.

- 8 cents per kilowatt-hour for the first thirty hours' use of the maximum demand.
- 5 cents per kilowatt-hour for the next sixty hours' use of the maximum demand.
- 3½ cents per kilowatt-hour for all excess use.

Determination of Demand.

Maximum demand is assumed to be the connected load.

Prompt Payment Discount.

10 per cent on all bills paid before the 10th of the month.

Minimum Charge.

75 cents for each kilowatt of connected load.

LARGE LIGHT AND POWER.

Available to all consumers willing to guarantee a maximum demand of ten kilowatts.

Rate.

- 7 cents per kilowatt-hour for the first thirty hours' use.
- 4 cents per kilowatt-hour for the next thirty hours' use.
- 3 cents per kilowatt-hour for the next sixty hours' use.
- 2.2 cents per kilowatt-hour for all excess use.

Determination of Demand.

Maximum demand is determined by demand meter or other exact method.

Prompt Payment Discount.

5 per cent on all bills paid before the 10th of the month.

Minimum Charge.

\$1.00 per kilowatt of maximum demand.

STREET LIGHTING.**Rate.**

\$60.00 per enclosed arc lamp 7.5 ampere series, per year, operated on moon-light schedule.

\$6.00 per incandescent 40-watt lamp per year, operated from dusk until eleven o'clock each night.

Terms and Conditions.

Incandescent light only available when arrangements have been made for the use of fifty or more such lights, covering not to exceed five city blocks for each fifty lights or fraction thereof.

720—Rate Schedules.

PUBLIC SERVICE COMPANY OF NORTHERN ILLINOIS has been authorized by the ILLINOIS STATE UTILITIES COMMISSION to make certain reductions in its Rate A, General Lighting Service, effecting various cities and towns. Order No. 2639, approved June 19, 1914.

Rate.

Effective July 1, 1914.

14 cents per kilowatt-hour for the first 30 hours' use of maximum demand.

8 cents per kilowatt-hour for all excess use.

Effective September 1, 1914.

13½ cents per kilowatt-hour for the first 30 hours' use of maximum demand.

8 cents per kilowatt-hour for all excess use.

Effective March 1, 1915.

13 cents per kilowatt-hour for the first 30 hours' use of maximum demand.

8 cents per kilowatt-hour for all excess use.

Prompt Payment Discount.

1 cent per kilowatt-hour if paid in 10 days.

129.1—Discrimination.

COMPLAINT V BETHLEHEM CITY WATER COMPANY, Alleging Discriminatory Charges in Favor of Customers in Districts where the Company is Furnishing Service in Competition with Municipal Plant. Decision of PENNSYLVANIA PUBLIC SERVICE COMMISSION, Holding that the Discrimination Is not Unjust and Permitting the Company to Continue the Difference in Charges. June 2, 1914.

The complaint sets forth that the company "charges two different prices for the same service in the same borough." The published rates of the respondent provide for a 25 per cent discount on bills paid within thirty days from date of bill, and for an additional discount of 15 per cent to customers on certain streets in West Bethlehem enumerated in the schedule as published.

West Bethlehem was originally the village of Hanover in Lehigh County. The respondent extended its water mains to this village and began to supply water to it February, 1886. The village was subsequently incorporated as the Borough of West Bethlehem and was consolidated with Bethlehem in Northampton County, August 16th, 1904. The Borough of Bethlehem has its own water plant. . .

In 1913 the Borough of Bethlehem extended its water mains to West Bethlehem, laying them upon the streets which have been above designated, and proposed to supply water at rates lower than those of the respondent. Thereupon the respondent as a matter of self protection and in order to meet the competition, made the additional discount of 15 per cent for prompt payment to consumers along the streets which have been described. There was no evidence to show and it was not contended that the rates established by respondent were excessive or unreasonable. It was, however, contended that the additional discount of 15 per cent for prompt payment allowed to consumers on one street and not to consumers on another street, only a square away, constituted a discrimination within the prohibition of paragraph "a," Section 8 of the Act of July 26th, 1913. The persons benefitted by this discount number one hundred. The total number of customers of the respondent company in West Bethlehem is nine hundred and fifty-seven.

The question raised under the facts so found is whether or not the additional discount allowed to certain consumers and not to all is such a discrimination as the Act of 1913 was intended to prevent. There is much of merit in the position of the respondent. It has invested large sums in its plant and has for thirty years at least supplied the people with a necessity of life without any return made to its stockholders. It now finds the territory it had occupied invaded and its rates presumed to be reasonable, in the absence of evidence to the contrary, assailed. It will be observed that the greater or lesser compensation forbidden by the Act of 1913 is that of a charge "for a like and contemporaneous service under substantially similar circumstances and conditions." While it is manifestly the purpose of the Act that public service companies should be supervised and controlled, and that everything in their conduct unreasonable or unfair should be prevented, there is nothing to indicate any intention to destroy vested interests or to hamper the proper exercise of the powers conferred upon such companies.

In the case of *Hoover vs. Pennsylvania Railroad Company*, 156 Penna. 220, the Supreme Court of Pennsylvania in construing the Act of June 4th, 1883, permitted a charge of a lower rate of freight upon coal transported to a manufacturing establishment from which the railroad received manufactured goods for transportation than to a coal dealer. The court said the Act "prohibits only discrimination which is undue or unreasonable and the prohibited discrimination is further limited by the consideration that it must be for a like service from the same place upon like conditions and under similar circumstances. If, therefore, the discrimination in a given case is upon conditions which are not like and circumstances which are not similar the Act is inapplicable." It has been held that in determining the question as to discrimination in railroad rates under the terms of the Interstate Commerce Act the fact of competition is material for consideration. In *Railroad Company vs. Behlmer*, 175 U. S. p. 671, it was said "all competition provided

it possessed the attributes of producing a substantial and material effect upon traffic and rate making was proper under the statute to be taken into consideration," and in 181 U. S. Reports p. 18, it was said "the only principle by which it is possible to enforce the whole statute is the construction adopted by the previous opinions of this Court, that is, that competition that is real and substantial, and exercises a potential influence on rates to a particular point brings into play the dissimilarity of circumstance and condition provided by the statute, and justifies the lesser charge to the more distant and competitive point than to the nearer and non-competitive place, and that this right is not destroyed by the mere fact that incidentally the lesser charge to the competitive point may seemingly give a preference to that point and that greater rate to the non-competitive point may apparently engender a discrimination against it."

In the present case with respect to the streets to whose residents the greater discount was allowed by the respondent, there was competition of a serious character. To these residents another supply was offered at lower rates. The undisputed testimony is that it was necessary "to meet their rates or lose the business entirely." To lose the business would be to render valueless the investment in that part of the plant. The competition was the more threatening because of the fact that it has the strength and power of the municipality to support it. As to what constitutes such competition as will create a dissimilarity of circumstances and conditions must be determined from the facts of each case as it arises. After giving careful consideration to the ascertained facts and the situation as it exists in West Bethlehem, it is our conclusion that such dissimilarity between the conditions upon the streets named and the others exist as to make the prohibition of the statute inapplicable. It follows that the complaint should be dismissed and it will be so ordered . . .

139.9—Deposits.

Complaint v. the PUBLIC SERVICE GAS COMPANY, Alleging that the Company's Action in Discontinuing Service to Consumer Was Unreasonable. Decision of the NEW JERSEY BOARD OF PUBLIC UTILITY COMMISSIONERS, Ordering the Company to Change its Rule and Practice in the Matter. April 20, 1914.

The respondent company discontinued service to a customer who had failed to pay a bill for gas within the time specified in the company's rule. The company gave one day's notice and the service was discontinued. It is contended that this action of the company was unreasonable in that the complainant had, for five years past, a deposit of five dollars with the company to guarantee payment of bills for gas supplied.

No question is raised as to the reasonableness of the rule requiring the deposit, nor as to the amount of such deposit. The sole question raised is as to the reasonableness of the practice of the com-

pany in discontinuing service when the deposit is more than sufficient to pay all outstanding charges.

To determine this question it is necessary to inquire into the nature of the deposit and the reasons which justify its exaction. These are discussed in the case decided by the Board in February, 1914, involving the reasonableness of the rule of the Easton Gas Works requiring deposits [5 RATE RESEARCH 25]. In that case the Board said:

"In determining the reasonableness of the impugned rule it is necessary to distinguish the advance deposit required by such a rule from a minimum charge, a service charge, a meter rent, an insurance fund to insure the integrity of the meter, and the base rate for metered gas or electric current. The sole function of the advance deposit is to insure the payment of service whose amount cannot be known in advance."

The fund is held to answer the default of the consumer, and whenever the consumer defaults in payment the fund may be resorted to. Its exaction cannot be justified on any other ground. Persons with credit and financial standing are not required to make a deposit. If the fund could be regarded otherwise than an answerable for the default of the consumer, it would be necessary for the company to reduce its claim to judgment and levy on the fund. Clearly the fund occupies no such position. It is a sum of money in the company's hands, which is answerable for the payment of the consumer's account, whenever there is default in the payment thereof in the ordinary course. In this view the company should have applied so much of that fund as was required to cancel complainant's charge for gas consumed.

In this situation, with complainant's debt extinguished, is one day's notice of a purpose to discontinue service reasonable?

We think not. The company is not required to furnish gas at a risk of loss from non-payment. Whenever it become necessary to have recourse to the guarantee deposit the company is justified in regarding the consumer as of doubtful responsibility and in protecting itself from the danger of future non-payment. But while it still has in hand more money of the customer than is required to meet current accounts, summary discontinuance of service is not warranted. In the judgment of the Board the company would be warranted in giving notice to the customer to restore the deposit to the original amount within a reasonable time, or, in case of failure to so renew the deposit, that the account would be closed and the deposit returned, after deducting all service charges to that date.

The company urged that transferring so much of the fund as would satisfy debts due would entail increased bookkeeping. This is undoubtedly true. It must not be overlooked, however, that the company is debtor to the consumer to the amount of the deposit and that its possession renders the company's account secure, and such bookkeeping as is entailed is required by the business of the company.

REFERENCES

COURT DECISION REFERENCES.

810—Municipal or Local Regulation of Utilities.

UNITED FUEL AND GAS COMPANY VS. COMMONWEALTH. Decision of the COURT OF APPEALS OF KENTUCKY May 15, 1914. 166 Southwestern 783.

The company's rates for gas were lower for customers who signed a five-year contract than for those who did not. The city council passed an ordinance making discrimination unlawful, and fixing a fine for violation of the ordinance. The Court holds that the ordinance is void for want of authority in the city to make it.

There is nothing in the act [Section 3639, Ky. St., governing cities of the fifth class], giving the city any power to make ordinances imposing fines upon corporations who discriminate improperly between their patrons. The ordinance granting the franchise is a contract between the city and the grantee of the franchise; and one party to a contract cannot, by his act, impose a fine upon the other party for a violation of the contract, in the absence of some legislative authority to do so.

129.3—Refusal of Service.

STATE ex rel. SCOTILLO et al. v. WATER SUPPLY CO. OF ALBUQUERQUE. Decision of the SUPREME COURT OF NEW MEXICO. April 28, 1914. 140 Pacific 1056.

The complainant in this case rented a building of a landlord, who contracted to furnish him with water. The landlord, however, became delinquent in his payments to the Water Company, whereupon the company turned off the water and took out the meter. The complainant then signed a new lease, whereby he agreed to pay the water rent, and made application to the company for service, assuring them of his willingness to abide by the rules and regulations of the company, etc. The company refused however to render the service until the bill owed by the landlord was paid. The lower court granted a writ of mandamus, to compel the company to furnish service to the complainant. This decision, however, reverses that of the lower court, and holds that the company's action is reasonable.

112—Franchises.

STATE ex rel CITY OF MILWAUKEE VS. MILWAUKEE ELECTRIC RY. & LIGHT CO. Decision of the SUPREME COURT OF WISCONSIN May 1, 1914. Dissenting Opinion May 18, 1914. 147 Northwestern 232.

This is a suit for mandamus to compel the company to pave the space beneath its road-bed with asphalt, the material with which the city had paved the rest of the street. The ordinance under which the company was doing business provided as follows:

"It shall be the duty of said railway company at all times to keep in good repair the roadway between the rails and for one foot on the outside of each rail as laid, and the space between the two inside rails of its double tracks with the same material as the city shall have last used to pave or repave these spaces and the street previous to such repairs, unless the said railway company and board of public works of said city shall agree upon some other material, and said company shall then use the material agreed upon."

The company averred its willingness to pave with cedar blocks, which was the material previously used; but the city seeks to compel the use of asphalt. The Court holds that, in the absence of any ordinance requiring asphalt paving, the company may pave with cedar blocks, providing that this is consistent with the condition of good repair, required by the franchise; and that the procedure of the city should be to prescribe by ordinance the duty of the company to keep this zone in repair by paving with asphalt.

Three of the judges in a dissenting opinion, hold that the franchise requires the company to repair, but not repave; and that

the logical result of this decision . . . is that no contract, with regard to paving, can be entered into between the city and the railway company under the terms of Section 1862, Stats., which the city may not abrogate at any time by passing an ordinance to that effect.

112—Franchises.

CITY OF COLORADO SPRINGS V. PIKE'S PEAK HYDRO-ELECTRIC CO. Decision of the SUPREME COURT OF COLORADO. May 4, 1914. 140 Pacific 921.

The franchise, under which the Company operated, required among other things, that it furnish the city such arc lights as it might need, at a certain rate per light; that it furnish a certain number of incandescent lights and arc lights for city buildings free of cost; and that it furnish to the city free of cost such electrical power not exceeding 50 horse power, as the city should need for "municipal purposes"; and finally that it should sell to the city, at the price it made to the most favored of its customers, such power beyond 50 horse power, as the city should require for municipal purposes.

The city eventually gave notice to the company that within 90 days it desired to be furnished with power in excess of 50 horse power, to the amount of 10,000 kilowatt hours per day. This power it proposed to distribute and sell for electric lighting purposes throughout the city; and it proposed to purchase the power at .585 cents, which was the charge made by the company to the Colorado Springs Electric Co., the company then supplying the city with electricity for lighting purposes. The company then declined to concur with the city's demands, averring that the power was not desired for "municipal purposes" within the meaning of the franchise; and that such a demand was contrary to the terms of the franchise whereby the company was required to furnish arc lights to the city. This decision reverses the decision of the district court, which was in favor of the company; and holds that the company must sell the amount of power the city has demanded.

513.9—Step Meter Rate.

MCRÆ V. WATER SUPPLY CO. OF ALBUQUERQUE. Decision of the SUPREME COURT OF NEW MEXICO. April 28, 1914. 140 Pacific 1065.

The company's franchise fixed water rates as follows:

"Meter rates to consumers during the continuance of this franchise shall not exceed the following rates:

200 gallons or less daily, per 1,000 gallons	\$.35
Over 200 and less than 600 gallons daily, per 1,000 gallons . . . . .	.30
Over 600 and less than 1,500 gallons daily, per 1,000 gallons . . . . .	.27½
Over 1,500 and less than 3,000 gallons daily, per 1,000 gallons . . . . .	.25
Over 3,000 and less than 10,000 gallons daily, per 1,000 gallons . . . . .	.20

All other rates to be special." . . .

The customer in the case interpreted this to mean that if the amount consumed was less than 200 gallons daily, a charge of 35 cents per 1,000 was correct; but if more than 200 gallons and less than 600 gallons were used daily, even though it amounted to but 201 gallons per day, the price should be 30 cents per 1,000 gallons, etc.

The company on the other hand contended that the charge should be made as follows: 35 cents per 1,000 gallons for the first 200 gallons or less used daily; 30 cents per 1,000 gallons for the excess over 200 and less than 600 gallons daily; 27½ cents per 1,000 gallons for the excess over 600 and less than 1,500 gallons daily, and so on through the schedule of rates fixed by the franchise.

The court holds that the customer's interpretation is correct.

INVESTMENT AND RETURN

311.3—Present Value.

"PRESENT VALUE" MISLEADING, by L. N. WHITNEY. An Address Delivered before the Telephone Society of Indiana. *Public Service Regulation*, 2 $\frac{3}{4}$ pages, June, 1914, p. 346.

The writer states that what we have been in the habit of calling the "present" value of a property, that is, the "replacement" value, less the proper depreciation reserve, is misleading; for the real present value of a property obviously cannot possibly be dependent upon a reserve. This real present value, however, is difficult to obtain and probably the value which we have been in the habit of calling "present" value may best be used as a basis for a proper return. It would be less misleading if we were to call it the "reserve" value; it being, as stated before, the replacement value less the proper depreciation reserve. It is stated that the stockholders of a company are entitled to a return on such parts of the property as they have produced; in addition, they are entitled to have their property properly protected by proper measures. These reserves may be created by taking a comparatively small amount of money out of the earnings, building new property with it (or otherwise investing it) and adding the return from this new property (or other investments) to the original reserves, in order that they may be increased to a given amount; or the reserve may be created by taking a comparatively large amount of money out of the earnings, which in itself, without investment, will create the given reserves, under which conditions if the reserves are for any reason put back into the plant (or otherwise invested) the earnings of that portion of the plant (or other investment) should not go to the stockholders but should go toward reducing the cost of the service to the users. The statement is made that the stockholders therefore should be satisfied if, with the reserves invested in the property, a property is allowed a proper return upon its "present" value if the "expense" necessary for proper reserves is based upon the "straight line" basis; but on the other hand they are entitled to have the property earn this proper return upon the "replacement" value if the "expense" necessary for the proper reserve is based upon the "sinking fund" basis. Either basis, however, results in the same rates to the patrons and the same rate of return to the investors.

300—Investment and Return.

REGULATION AND REASONABLE RETURNS, by HALFORD ERICKSON. A Paper Presented at the Convention of the Michigan Section, N. E. L. A., June 17. *Electrical Review*, 4 pages, June 27, 1914, p. 1296.

Regulation of public utility companies by state commissions, the proper relations of such commissions to the companies and to the general public, and the beneficial results which should follow from fair and efficient regulation, is set forth in this paper. The question of a proper rate of return for public utility enterprises is discussed. Return is made up of profit, including wages of management and compensation for risks, and interest. The rates and terms upon which the necessary capital and business ability can be had are matters that depend on the location of the plant and on the conditions generally by which the plant is surrounded. The best evidence on this point is usually found in the prices at which the various classes and kinds of securities of such undertakings are selling in the market. The writer gives facts and conclusions gathered from an investigation of a large proportion of the more representative bond and stock issues of public utilities. It is stated that since 1904 the tendency of the rate of interest and of prices has been upward. When such advances in cost are due to causes over which the management has no control and when they result in lower than reasonable returns to those who are responsible for the business, then injustice is done. Such a situation is neither fair or in line with public policy. In fact, it is as much in line with public interests to raise rates that yield less than reasonable returns as to lower rates that yield more.

395—Proceedings of Technical Associations.

MICHIGAN SECTION N. E. L. A., Annual Convention-Cruise on Great Lakes, June 17 to 20. *Electrical Review*, 3 $\frac{2}{3}$ pages, June 27, 1914, p. 1275.

An account is given of the proceedings of the convention, including abstracts of the following papers read at the different sessions: "Reserves for Depreciation," by H. A. Fee; "Contract and Franchise Rates as Affected by the Public Service Commission Laws," by James B. Oxtoby; "Wild Schedules I Have Known," by Wm. J. Norton; "Deep Well Pumping," by R. C. Hall; "Hydroelectric Power in Michigan," by G. W. Bissel; "The Rowena Street Substation of the Edison Illuminating Company," by James W. Bishop; "Out-Door Substations," by A. A. Meyer; "Safety in the Electrical Industry," by Charles B. Scott; "Fundamental Principles of Interior Illumination," by M. Luckiesh, and "The New Mazda Lamp," by J. R. Colville.

RATES**510—Forms of Rates.**

SYSTEMS OF CHARGES FOR ENERGY, by A. HUGH SEABROOK. *Electrical World*, 1 page, June 20, 1914, p. 1451.

In this communication to the *Electrical World*, Mr. Seabrook describes an unmeasured rate which is being used in England in connection with small consumers. It is an unmeasured rate based on the following foundations: (a) The supply authority wires the property (either by its own staff or by contractors) by agreement with the owners. This is only done where the owners are substantial people enabling a ten-year agreement to be entered into, resulting in the amortization of the investment within that period; (b) the supply authority furnishes the lamps and maintains the installation; (c) the charge for energy is based on the supply authority's cost, plus profit, assuming twenty-four hours' use per day of the supply. In many cases this could be profitably undertaken at 1 cent per kilowatt-hour at 100 per cent load-factor; (d) a weekly sum is charged the consumer, payable in advance, which can be collected by the owner's agent at the same time that he collects the weekly rent, the supply authority allowing, by arrangement with the owner, a collecting commission to the agent; (e) in some cases this weekly sum is included in the rent, as far as the tenant is concerned no distinction being made between the cost of light and rent charge. The owner's agent in these cases hands over the electric light proportion of the rent to the supply authority; (f) the weekly charge referred to consists of: (1) A sum calculated to pay back to the supply authority the cost of the installation in ten years and the interest combined; (2) a sum calculated to repay the supply authority for the supply of lamps (which are, of course, always tungsten) and repairs and maintenance of the installation; (3) a sum for energy used, based on, say, twenty-four hours' use per day at 1 cent per kilowatt-hour. This provides for waste in the use of energy. For ordinary purposes the writer holds that the ideal basis of rates is the Hopkinson system.

400—Rate Theory.

THE STANDARDIZATION OF TARIFFS, by J. HORACE BOWDEN. Presented before the Incorporated Municipal Electrical Association, Birmingham, England, June 15-20, 1914. 42 pages.

The use of a strictly cost-of-service-basis in rate-making is advocated. It is said that there is apparently no reason why every consumer should not utilize the service to such an extent as to make a return in full, as nearly as may be, to the undertakers of the cost of such service, and it is to be expected at the hands of the administrators of the supply so to adjust tariffs as to conform with the laws

of equity. This can best be done by studying the conditions of each class of supply in each individual area upon its own merits, and estimating the relationship of the demand for each class to the actual maximum demand upon the system. Assumption and experience must, to a large extent, control these estimates. Apart from public lighting, internal business lighting, and what is known as the 100 per cent load-factor power supply, all other demands are more or less subject to the application of diversity factors. The table of diversity factor for the various classes of business, used in the Poplar area, London, is given and an explanation of the reasons for adopting each shown. There is a discussion of the division of costs necessary in determining fixed and running charges. These costs are divided into three groups: First, the service cost, or the individual charge on the undertaking directly attributable to each consumer; secondly, the fixed cost, or the total sum necessary to carry on the undertaking, irrespective of the amount of energy supplied; and thirdly, the running cost, or the actual cost of supplying a unit of energy after making provision for service and fixed costs. There is a detailed discussion of service costs, fixed costs. The author claims that the system suggested is capable of adaptation in any district, and therefore a step in the direction of the standardization of tariffs.

410—Cost of Service.

ECONOMY OF CENTRAL STATION SERVICE. *Electrical World*, $\frac{3}{4}$ page, June 20, 1914, p. 1427.

An article by Dr. Walter Straus, published recently in the *Elektrotechnische Zeitschrift*, comparing the economic results to be obtained from central-station service with those of various sorts of localized energy-producing systems is discussed. The article is characterized as one of the most thorough and up-to-date of this sort of comparison. The statement is made that while the relative costs and prices would be somewhat different under American conditions, on the whole, the case would be slightly better for central-station service here than in Germany, where labor in an isolated plant is relatively cheap and the costs of the machinery somewhat less.

GENERAL

788—Service Rules.

HANDBOOK ON OVERHEAD LINE. Compiled by the Sub-Committee on Overhead Line Construction N. E. L. A. Presented at the Thirty-Seventh Convention at Philadelphia, June 1-5, 1914. 819 pages; Price to members \$3.00.

The purpose of this Handbook is the presentations, in one volume, of descriptions of the methods and the materials employed in overhead line construction, and a tabulation of the necessary formulae for the electrical and mechanical solutions of various transmission and distribution problems.

735—Technical Data.

CENTRAL ELECTRIC LIGHT AND POWER STATIONS AND STREET AND ELECTRIC RAILWAYS, 1912. Bulletin 124, Bureau of the Census, 113 pages.

A series of tables are presented giving the principal data in regard to central electric light and power stations and street and electric railways, to be published as a bulletin for the census of these industries which covered the calendar year 1912. Pages 14-55, are devoted to central station statistics, and pages 58-113, to street and electric railways.

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July 8, 1914

No. 15

RATE RESEARCH



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RATE RESEARCH COMMITTEE
OF THE
NATIONAL ELECTRIC LIGHT ASSOCIATION
120 WEST ADAMS STREET - - - CHICAGO

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Rate Research

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Rate Research

Vol. 5

CHICAGO, JULY 8, 1914

No. 15

For statement of facts and opinions contained in papers abstracted herein, the Association does not hold itself responsible

RATES

CLEVELAND, OHIO

720—Rate Schedules.

The following are the rates of the CLEVELAND ELECTRIC ILLUMINATING COMPANY, Cleveland, Ohio (pop. 560,663), effective June 29, 1914.

RETAIL LIGHT AND POWER.

Low tension current for light and power, available to all consumers using the company's standard service, to the exclusion of any other service, on the same installation.

Rate.

- 10 cents per kilowatt-hour for the first 36 hours' use of the consumer's demand.
- 5 cents per kilowatt-hour for the next 30 hours' use of the consumer's demand.
- 3 cents per kilowatt-hour for all current used in excess of 66 hours' use of consumers' demand.

Determination of Demand.

For Commercial Lighting, 100% of total connected load shall be the demand.

For Church Lighting, 30% of total connected load shall be the demand.

For Elevator Motors, 50% of total connected load shall be the demand.

For Motors and Rectifiers:

80% of the rated capacity up to 5 kilowatt rating for one motor.

75% of the rated capacity up to 5 kilowatt rating for two or more motors.

75% of the rated capacity from 5 to 10 kilowatt rating for one motor.

70% of the rated capacity from 5 to 10 kilowatt rating for two or more motors.

70% of the rated capacity for over 10 kilowatt rating for one motor.

65% of the rated capacity for over 10 kilowatt rating for two or more motors

For special devices, by tested demand measurements.

For welding apparatus, the kilowatt demand shall be taken as 75% of the sum of the kilo-volt-ampere ratings of all such apparatus connected.

In rating commercial installations, motors or other devices of less than one kilowatt capacity, the use of which is only incidental, as fans, irons or meat grinders, etc., shall not be included in the rating.

The Company reserves the right to test the kilowatt demand and to take the maximum kilowatt demand as shown by such test as the basis of rating for the month in which such test is made and for each subsequent month thereafter until again changed by another such test.

EDITORIAL NOTE.—All indented matter is direct quotation.

Terms and Conditions.

Payment is to be made within ten days of presentation of bills.

WHOLESALE LIGHT AND POWER.

Available for all consumers using company's standard service exclusively for low tension alternating and direct current in excess of 5 kilowatts demand.

Rate.**Demand Rate.**

\$2.00 per kilowatt per month for the first 50 kilowatts of demand.

\$1.25 per kilowatt per month for all excess over 50 kilowatts of demand.

Energy Rate.

2.4 cents per kilowatt-hour for the first 2500 kilowatt-hours used per month.

1 cent per kilowatt-hour for the next 100,000 kilowatt-hours used per month.

.5 cent per kilowatt-hour for all excess use.

Maximum Rate.

10 cents per kilowatt-hour for all current used.

If the kilowatt demand in any month is less than 5 kilowatts the demand rate in such month shall be \$3.60 per kilowatt-hour per month and the unit rate shall be 3 cents per unit.

If the kilowatt demand in any month is 5 kilowatts or more, but the total number of units used in such month is less than 90 hours' use of such demand, the demand rate for such month shall be \$3.60 per kilowatt per month, and the unit rate shall be 3 cents per unit, but the total bill for such a month shall not exceed 90 hours' use of such demand at the regular demand and unit prices above specified.

Determination of Demand.

The kilowatt demand shall be determined monthly by demand measurements, and shall be the average of the weekly maximum one hour kilowatt demands during the month.

Power Factor.

For alternating current service, when the greater part of the load is power and the billing demand exceeds 75 kilowatts, the Company reserves the right to test the power factor of the consumer's load and if the average power factor is greater than 75%, then the demand shall be reduced in accordance with the following formula:

Billing Demand equals kilowatt demand as measured divided by average per cent power factor times 75.

If the average power factor is less than 60%, then the demand shall be increased in accordance with the following formula:

Billing Demand equals kilowatt demand as measured divided by average per cent power factor times 60.

The Company will make without charge a power factor test at the consumer's request once a year, if his demand exceeds 75 kilowatts. By power factor is meant the average power factor under normal operating conditions.

In the case of hoists, elevators, welding machines, furnaces, and other installations where the use of electricity is intermittent or subject to violent fluctua-

tion, the consumer agrees, if requested by the Company, to furnish at his own expense, suitable equipment to reasonably limit such intermittance or fluctuation, or to have the Company base the consumer's maximum demand upon 75 per cent of the kilo-volt-ampere rating of the apparatus connected, instead of on the average one hour demand.

WHOLESALE LIGHTING AND POWER RATE.

Available for all consumers using the Company's standard service exclusively for high tension alternating current in excess of 500 kilowatts.

Rate.

Demand Rate.

\$1.25 per kilowatt per month for the first 1000 kilowatts of demand.

\$1.00 per kilowatt per month for all excess over 1000 kilowatts of demand.

Energy Rate.

.90 cents per kilowatt-hour for the first 100,000 kilowatt-hours used per month.

.45 cents per kilowatt-hour for the next 100,000 kilowatt-hours used per month.

.40 cents per kilowatt-hour for all excess use per month.

If the kilowatt demand in any month is less than 500 kilowatts the charge for service during such month shall be in accordance with the schedule in effect for low tension alternating current applicable to such service, but the total bill for the month of 60,000 kilowatt-hours or less are used shall not exceed \$1,165 and if over 60,000 kilowatt-hours are used shall not exceed the charges made for 500 kilowatts of demand, and the units used at the regular demand and unit rates of this schedule as above specified.

If the kilowatt demand in any month is 500 kilowatts or more, but the total number of units used in such month is less than 120 hours use of such demand, the charges for service during such month shall be in accordance with the schedule in effect for low tension alternating current, applicable to such service; but the total bill for such month shall not exceed 120 hours use of such demand at the regular demand and unit rates of this schedule as above specified.

Determination of Demand.

The kilowatt demand shall be determined monthly by demand measurements, and shall be the average of the weekly maximum one hour kilowatt demands during the month.

Power Factor.

The Company reserves the right to test the power factor of the consumer's load, and if the average power factor is greater than 75%, then the monthly kilowatt demand shall be reduced in accordance with the following formula:

Billing demand equals kilowatt demand as measured divided by average per cent power factor times 75.

If the average power factor is less than 60%, then the monthly kilowatt demand shall be increased in accordance with the following formula:

Billing demand equals kilowatt demand as measured divided by average per cent power factor times 60.

The Company will make without charge a power factor test at the consumer's request, once in six months. By power factor is meant the average power factor under normal operating conditions.

COMMISSION DECISIONS**NEW YORK****335—Issues of Stocks and Bonds.**

Application of the CANADIAN-AMERICAN POWER CORPORATION for Authority to Issue Stock, to Merge the Property of the Niagara Falls Electrical Transmission Company, and for Permission to Begin Construction and to Exercise its Franchises. Decision of the NEW YORK PUBLIC SERVICE COMMISSION (2D) Fixing Terms and Conditions, February 12, 1914.

The Canadian-American Power Corporation is a new company formed to bring into the United States at the Niagara Frontier electric current generated in Canada by Niagara River hydraulic power, generated by the Electrical Development Company of Ontario, Ltd., of which the Toronto Power Company, Ltd., is lessee. The Commission states that the question as to whether or not consent should be granted to the applicant depends principally upon the case involving the issuance of capital stock. The syllabus of this case as prepared for the Commission is here given in full.

1. In deciding these cases the Commission must assume that relations between Canada and the United States affecting the means of continuing great industries which have grown up in reliance upon the use of electric power imported from Canada, and as well the interests of the Canadian electric producing companies themselves, have become fixed and subject only to such changes as will protect the great commercial and industrial interests and rights now served by electric power brought from Canada; and particularly so as in these cases it appears that the percentage of export power to plant capacity is the same as has been and is allowed by Canada to other exporting electrical companies.

129.1—Discrimination.

2. Discrimination in prices charged by Canadian electric producing companies whereby Canadian purchasers are favored to the prejudice of American customers, and the existing shortage of electric power on the Niagara Frontier discussed, with finding that the various contracts with the producing companies should be revised as to prices charged the American distributing companies, and with further finding that there is a large shortage of electric power in Western New York with a strong demand for greater supply which is not being met by existing companies, and that the contracts mentioned tend to perpetuate high rates to consumers. *Held*, That the Commission must deal practically with a situation which has been forced through the making of contracts before the Public Service Commission Law became effective, and that such shortage in service and prevailing rela-

tively high rates constitute good cause for permitting another company to enter the field under regulation as to service and thereby diminish the shortage conditions which now exist while providing a lower average rate basis.

330—Capitalization.

3. Capitalization of a contract for the furnishing of electric horsepower whereby stock would be issued to represent all estimated available profits from the distribution and sale of such power condemned as a practice, and in this case is not endorsed.

4. Decision of the Commission in *Fuhrmann v. The Cataract Power and Conduit Company*, 3 P. S. C., 2nd D., 656, reaffirmed and distinguished as a rate case while this is a case involving only the issuance of stock for the purposes of engaging in business.

122—Just and Reasonable Charges.

5. As the power situation on the Niagara Frontier has been developed, the contract in question, which is for the furnishing of 46,000 Canadian produced electric horsepower for importation into the United States, is a desirable contract, which if acquired by the applicant company on a reasonable basis, will in the sale of electric power under it benefit the people in that section of the State, but in order to secure that benefit to the full extent the service and the rates charged for such power must be made without question the subject of regulation.

6. The mere sale of such imported electric power at or near the International boundary to two or three existing American companies would not indicate a necessity for the formation of a public utility company or the issuance of stock on account of such sale, since no public utility is produced by a company confined to such a business, and *held*, therefore, that stock shall not be permitted to issue in this case until (1) the applicant shall stipulate to reserve at least 23,000 horsepower of its sale capacity for direct service to consumers as against transmitting or distributing companies; (2) the applicant shall have definitely brought before the Commission for its approval under the law the location of its transmission and distribution lines with local franchises or acquired rights of way.

7. The applicant company is required to stipulate also that it will not charge as the *average* price for all of its current as distributed to small and large consumers or buyers more than \$19 per horsepower, and that every contract written by the applicant company shall contain a clause that the rates of charge, terms or conditions affecting rates, and the time duration of the contract shall be subject to revision by the Commission. The Commission further rules that if the sale of current by the applicant shall be confined to large users, the average price it receives must be on a lower basis than \$19 per horsepower sold.

340—Rate of Return.

8. For acquisition of the contract, or for reward to those who have given their expert services, who have expended money for organization of the company, who have taken on the risk of becoming contracting parties both to the contract and the agreement to purchase the Niagara Falls properties by taking over stock control and debts, and who must defer their hope of profit until the new company gets into full business operation, the true basis is what the new company can afford to pay and thereafter properly serve the public with current at relatively low rates, giving due consideration, within that limitation, to the view of a liberal reward to the projectors of this enterprise.

9. The Commission holds under all the circumstances of this case that the applicant can afford to pay, and the actual owners of the contract are entitled to receive as and for their services, risk, present obligations, and deferred profits while the business is being developed, the sum of \$1,000,000 in stock for and on account of the assignment of this contract, with the right to employ the same in the applicant's business, and that a business profit thereon of 7 per cent with amortization of the stock by a yearly payment during thirty years, the life of the contract, would constitute an estimated low minimum profit, which would not affect the public right or interest, and which would not, under the ruling of the Commission, constitute an additional amount to be added to the value of the company's property in a future case involving the fixing of rates.

144—Mergers.

10. The applicant company will be permitted, after filing a required stipulation and locating its service system, to take over the stock, bonds, and debt of the Niagara Falls Electrical Transmission Company, and to merge that company upon the cancellation of said stock, bonds, and debt, and upon the cancellation of certain bonds and debt of the Niagara Falls Gas and Electric Light Company, a corporation subsidiary to the said Electrical Transmission Company.

335—Issues of Stocks and Bonds.

11. The Commission holds that the applicant shall be restricted to a total of \$1,250,000 issue of stock on account of engaging in business with said contract and said acquisition of the Niagara Falls Electrical Transmission Company, of which amount \$435,000 may be 7 per cent cumulative preferred stock; but before any stock shall be issued or entry of any order permitting such stock to issue or such merger to be made effective, the applicant shall secure authority for the location and operation of its transmission and distributing systems, and shall file a stipulation covering the various matters above stated.

330—Capitalization.

In regard to the capitalization of the contract the decision says:

Much has been said in this case about "Capitalizing this Contract". No contract of this nature should be capitalized. Taking out stock

to represent all estimated available profits is a practice not to be endorsed. The Canadian-American Power Corporation is indeed asking that very thing. It is computing the cost under this contract with the cost of production by steam power, and it is suggesting that the difference should indicate the proper basis of capitalization. In almost the same breath it says, in its presentation of the matter, that such capitalization, stated to be about \$7,000,000, should be reduced to \$3,000,000. As was said so well by Commissioner Stevens in the Cataract Power and Conduit case, this reduction of claim from the logical one based on the higher sum to the lower based on an arbitrary estimate, gives up the whole argument for capitalization based on lower producing cost as compared with steam production. It confesses that the basis for "Capitalizing the Contract" rests not upon estimated steam power cost, and proceeds then to use the basis of obtainable profits, and so the argument on that basis is immediately taken up and urged. Neither argument is sound. The harnessing of the always flooding Niagara River to produce electric current for light and power is permitted by the State and the two Nations to provide these necessities cheaply to the people. A Public Service Commission having our present power would have regulated the issuance of securities as well as the formation of companies in ways based upon value for expenditure and the necessity of proposed companies, with resulting rates to the public for light and power much lower than those now prevailing on the Niagara Frontier. To say now that steam power cost is the measure of hydraulic power capitalization does not appeal to any sense of fair play or proper public protection. To say now that the applying company may take some arbitrary basis and claim that capitalization to that amount is justified by assumed possible profits is equally indefensible. This Commission abates not one jot its ruling or the basis of its ruling in the Cataract Power and Conduit case with reference to the contract there involved, or with reference to this contract as that ruling may have bearing here.

In the Cataract case, the Commission was not asked to capitalize a contract, but it was asked to add to the property value of the Cataract company's property the sum of \$2,000,000 capital stock as representing the value of its contract for power with the Niagara Falls Power Company, and so thereby increase the value of its property upon which in that case we must allow a reasonable rate of return. That was exclusively a rate case. In this case we are not asked to do anything of that kind. All that this applicant is requesting here is that stock may be issued for the acquisition of this contract. Nothing is said about the inclusion of stock issued for that purpose in estimating the value of property devoted by this applicant to public use in some future rate case. All of the opposition to the issuance of stock for the acquisition of the contract in this case is based upon the fear or belief that if stock is so allowed by this Commission for that purpose now, such stock must be added to other property value of the applicant company, when in a future rate

case we may be called upon to value the property and fix a rate of return thereon by which to fix the company's charges for public service. Such fear or belief is entirely unfounded.

If this business contract must be valued in a rate case and added to the value of property actually devoted to the public use, then every contract for supplies should be valued; then the company's contracts for the sale of light and power to its customers in such a case should be valued; then indeed, every specious plea for added valuations in rate cases should be granted.

The amount of stock issued by a public utility company for its proper corporate purposes does not fix the rate of return or have anything to do with fixing the rate return. The amount of stock stated in shares merely represents the division of the ownership of the property into so many parts. It is also the basis of dividend declarations: It does not follow that the surplus earnings of a company must always be made to yield a given rate of return upon the shares. (*Fuhrmann v. Buffalo General Electric Company*, 3 P. S. C., 2nd D., 739).

We are dealing here with the issuance of shares for the acquisition of this contract. In the Cataract case, *supra*, we dealt with already issued shares as the claimed basis on the part of the company to represent part of the property on which it is entitled to earn a return. We held in that case that shares of stock paid for the Locke contract with the Niagara Power Company could not be included in and added to the value of property on which the rate of return was to be figured. The same reasoning would apply in a rate case involving this company. That, however, is very far from saying the Cataract company was not entitled to acquire the Locke contract at some price. If we were so to hold it would be entirely possible for astute individuals to take these contracts personally, by actual agreement or by mutual understanding, and by cornering available production create such demand for industrial power as would render the public clamorous for supply at high cost and at the sacrifice of all approvable valuation principles.

We do not think the applicant has sustained its claim for a payment of three million dollars in its stock for these contract rights. For acquisition of the contract, or for reward to those who have given their expert services, who have expended money for organization of the company, who have taken on the risk of becoming contracting parties, both to the contract and the agreement to purchase the Niagara Falls properties by taking over stock control and debts, and who must defer their hope of profit until the new company gets into full business operation, the true basis is what the new company can afford to pay and thereafter properly serve the public with current at relatively low rates, giving due consideration, within that limitation, to the view of a liberal reward to the projectors of this enterprise. . . . In this case there is no producing plant involved to be valued in a future rate case. What this company pays for acquiring the

contract is represented in the rate of return upon its property which it has constructed and put into public use. The amount so paid in stock, or with cash realized from the sale of stock, is not a basis on which to figure a rate of return. It is a sum which, as with all of its other stock, represents the equity in shares of the company. When the company has left over a certain sum applicable to dividends, the stock issued for the acquirement of this contract and all of its other stock will benefit thereby. In no other way can the purchase price of the contract be considered.

Our problem here is not at all a question of property value to be figured in a rate case. It is at what stock basis we will permit it to organize for business with the acquisition of this contract. Such a problem refers only to what this company can with minimum prospective profits afford to pay for the contract which, when acquired, will represent its net cost of production. Its net cost of production is not in anywise increased by such payment. To value such a contract for rate making purposes would involve the impracticable task of valuing the producing plant in Canada and allowing for rate of return to the Canadian producer, and other considerations which wholly deny valuation of a business contract in a case involving the fixing of rates.

Commissioner Sague issued a dissenting opinion in which he discusses the capitalization of the contract as follows:

The opinion indicates that stock may be issued for organization purposes and yet be disregarded when the proper rate of return is estimated in a future rate case. I can not recognize such a distinction. There are cases in which the Commission must permit the issuance of securities for refunding or for the reorganization of existing companies without committing itself regarding the fundamental value of such securities or their right to earn interest charges or dividends. In the case of a new company, however, the Commission acts with full power and with evidence of value before it. When its consent is given and a certificate made that the issuance of securities is "reasonably required," and that such securities are presumably of full value as required by law, the Commissioners should consider themselves bound to recognize the right of such securities to earn a proper return on their face value, or acknowledge that their original determination was a mistake. Any stock issued for the "acquisition" or "capitalization" of this power contract must therefore be considered as entitled to a fair rate of dividend as measured by the stock of similar companies carrying similar risks. A denial of this right to an investor who may have been favorably influenced by the Commission's approval would be difficult to explain. In this matter, the position of the City of Buffalo as outlined in the brief of its corporation counsel, as follows, appears sound:

If the Commission should approve of this stock issue, it is apparent that when a question of rates to be charged for this power comes be-

fore the Commission for determination it will be difficult for the Commission to refuse to consider that contract as having a value equivalent to the par value of the stock issued for it.

MASSACHUSETTS

616.1—Street Lighting.

COMPLAINT VS. CAMBRIDGE ELECTRIC LIGHT COMPANY, Alleging that the Price for Street Lighting Service in Cambridge (pop. 104,839), is Excessive. Decision of the MASSACHUSETTS BOARD OF GAS AND ELECTRIC LIGHT COMMISSIONERS, Fixing Rates, June 18, 1914.

330—Capitalization.

Neither side offered a valuation of the company's property, although certain estimates were offered by the city with respect to its probable value as a basis for the return. It was also urged in behalf of the company that, inasmuch as certain increases of stock had been taken by the stockholders at \$200 a share, all of the outstanding stock should be reckoned at that price as a basis for the return.

While the Board has taken into account the probable value of the company's property, it has not deemed it necessary to make a detailed and exhaustive valuation for the purposes of this decision. Nor is it willing to concede the contention of the company based upon the issue price of the stock. The anti-stock watering laws, so called, under which a considerable amount of the company's outstanding stock has been issued, were evidently designed by the Legislature to limit the number of shares to be issued, not merely by the amount of money reasonably necessary to be raised, but by requiring the new stock to be offered at such premium as the shares might be expected to command in the market. It was clearly the legislative purpose that the corporation should gain rather than the stockholders by the issue of new stock. The change in this provision in 1909, allowing the directors to fix the price in the first instance, doubtless liberalized the law, but was not intended to change its original purpose nor to permit the fixing of the price of such new stock materially lower than would insure a ready market for the issue.

Under this law the company has realized on its outstanding capital stock of \$850,000 premiums ranging from \$20 to \$100 a share, and amounting in all to the sum of \$270,000. The contention of the company is, therefore, that with an outstanding capital of \$850,000, and upon an actual investment by the stockholders of \$1,120,000, it is entitled to a return upon \$1,700,000. It may be conceded that, with respect to a company ably and conservatively managed, the Board is not required to consider seriously the propriety of a 10 per cent dividend. But there is a wide difference between permitting the company to earn what is, under all the circumstances, a reasonable dividend on its authorized capital and acknowledging that, as a matter of right, it is entitled to earn from now on not less than some

certain definite return on its full market value. The law intended impliedly, but plainly, to limit the dividend burden. The contention of the company, on the other hand, would make the law operate to capitalize against the public the earning power of the property under existing conditions and prices. It would convert the strength and security resulting from an amount of capital low, relative to the volume of business, into a menace to the future stability of the company, and would tend seriously to impair, if not wholly to subvert, the manifest purpose of the public policy expressed in the law. . . .

620—Factors Affecting Rates.

In a recent decision with respect to street lighting prices the Board had occasion to say:

The Company's customers may be broadly divided into two groups,—those who are dependent upon the company for their supply and those who may readily supply themselves in other ways or by other forms of power. To the first the company may dictate the price, controlled only by motives of business expediency, its own sense of justice and its duty as a public servant. To the second the company must so fix the price as to secure the customer's business or else go without it. The variety and wide range of the prices offered by the company are ample evidence of its recognition of these facts. The city with respect to its municipal arc system plainly belongs to the first class. [Worcester case 2 RATE RESEARCH 22.]

It must be equally obvious in this case that it is not those customers to whom prices are now offered at less than the maximum net price who should profit by a reduction. Such customers are already enjoying prices determined largely by the desire to secure their business, and the justification for these lower prices from that standpoint is found in the recent rapid development of the company's output and profits. The advantage of any reduction, which the Board may require, should rather accrue to the customers who must in the nature of things pay the maximum price and to the city for account of its street lighting. . . .

A reduction is made in the maximum rate to commercial customers of from 10 cents, the former rate, to 9 cents per kilowatt hour. The Board states that a reduction in price creates an increase in demand, which is difficult to forecast accurately, although in this company's experience in the case of voluntary reductions it has seemed to compensate fully for any prospective loss in revenue.

This, however, may not be true of street lighting. A reduction in price for this service, while to some extent encouraging its extension, may result in a corresponding decrease in revenue. . . .

The prices recommended for street lighting are as follows:

The price of the 6.6 ampere magnetite street lamps installed on ornamental posts supplied by said company shall be not more than \$98 a year for those burning all night and every night, and \$72.50 a year for those burning every night until midnight, so long as not less than

60 of each class are so supplied; and that the yearly prices for incandescent street and bridge lamps burning all night and every night, except as otherwise indicated, so long as not less than 740 of such lamps are so supplied, shall be as follows:

- \$17.00 for 50 watt tungsten lamps.
- 20.00 for 75 watt tungsten lamps.
- 25.00 for 100 watt tungsten lamps.
- 29.00 for 125 watt tungsten lamps.
- 50.00 for 250 watt tungsten lamps.
- 60.00 for 3-light clusters of 100 watt tungsten lamps.
- 73.00 for 2 lamps per post of 250 watts each, one burning till midnight and one burning all night.
- 12.50 for 60 watt lamps burning until 10 p. m.

With the addition of \$1 a lamp a year for incandescent lamps installed in arc lamp hoods or outer globes, and of \$2 a lamp a year for incandescent lamps installed on ornamental posts, and with the deductions for so-called "ornamental lighting" and for "outages."

REFERENCES

COURT DECISION REFERENCES.

129—Default in Public Service.

CITY OF WHEELING V. THE NATURAL GAS COMPANY OF WEST VIRGINIA. Decision of the SUPREME COURT OF APPEALS OF WEST VIRGINIA. No. 2240.

The City of Wheeling is operating an artificial gas plant, as successor of the Wheeling Gas Company, furnishing gas for illuminating purposes. The city granted a franchise to the respondent natural gas company authorizing it to furnish gas for heating purposes, but protecting the municipal plant from competition in supplying gas for illuminating purposes. It appears that subsequently the city granted electric light companies the right to furnish lighting service, that the municipal plant was allowed to become inadequate and obsolete and that respondent was allowed to furnish lighting service in sections to which the mains of the municipal plant did not extend. Certain sections of the city are therefore, served by the private companies receiving better service at lower rates than other sections served by the municipal plant. Suit is brought by the city to restrain the respondent from furnishing gas for lighting in competition with the municipal plant contrary to the terms of the franchise. The following is, in part, the conclusion of the court.

When a municipality steps outside its purely governmental sphere, to engage in a purely business enterprise, its contracts, rights and obligations are measured by the same rules applicable to private persons. *Wigal v. City of Parkersburg*, W. Va., S. E., decided at this term. If the old Wheeling Gas Company, to whose rights plaintiff succeeded, under the act of 1850, was here complaining in the place of plaintiff, and it had neglected its duty to serve the public with a good quality of gas, as plaintiff has done, and under the circumstances and conditions disclosed here, would any court of equity entertain it, and enforce against defendant the condition of its franchise, and thereby force upon the citizens served the use of gas unfit for consumption, and deprive them of rights enjoyed by others in the use of a better and cheaper gas? We do not think so. We think that would be an abuse of

equitable process. If so upon what principle has plaintiff any better right? We think it has none. We are not called upon to decide and do not decide, what a court of equity should do under other and different circumstances and conditions, but under those disclosed by this record, we have no hesitation in holding upon broad equitable principles that plaintiff is not entitled to relief prayed for.

226—Service.

STATE ex rel. DE BURG v. WATER SUPPLY CO. OF ALBUQUERQUE. Decision of the SUPREME COURT OF NEW MEXICO. April 28, 1914. 140 Pacific 1059.

The sole question presented by this appeal is whether the property owner of the water company must defray the expense of laying the service pipe from the main to the property line and making the necessary connection with the main.

The Court interprets the company's franchise to mean that the company must pay for the connection; and orders the company to give the service.

PUBLIC SERVICE REGULATION

200—Public Service Regulation.

THE PASSENGER TRANSPORTATION PROBLEM. REPORT OF THE SPECIAL SUB-COMMITTEE, CITY OF MANCHESTER TRAMWAYS DEPARTMENT. February 2, 1914. 141 pages.

Part 1 of the report is devoted to general observations on the passenger transportation in large cities. On page 10, in the discussion of the New York transportation problem, reference is made to the work of the First District Commission. It is said that the excellent work of this Commission, the thoroughness of its investigations, the breadth of view which it has exhibited in making preparations for the future development of the transit facilities of New York, can only be fully appreciated by a visit to that city and a detailed examination of the Commission's methods, and the work it has already done and is still carrying out.

INVESTMENT AND RETURN

314—Overhead Charges.

OVERHEAD CHARGES IN VALUATIONS, by HARRY G. ABENDROTH. *Electric Railway Journal*, 3½ pages, June 27, 1914, p. 1434.

The various items properly included in overhead charges, affecting the appraisal of tangible property are considered, following the classification adopted by the American Electrical Railway Accountants' Association. Actual or possible incidents are described, based upon the experience of The Milwaukee Electric Railway and Light Company, illustrating in a practical manner the necessity of allowing for such overhead expenses. The difficulty of determining just what these expenses have been and of obtaining full recognition of all such legitimate expenditures in any inventory of utility properties is set forth. A table is included show-

ing overhead charges used in various traction appraisals. In conclusion the writer says, "What is particularly needed is an historical study by engineers and accountants of the actual overhead costs. In no other way can much of the doubt as to actually existing costs be dispelled and all past outlays for property be recognized."

360—Depreciation.

DEPRECIATION CHARGES IN OHIO. *Electrical Railway Journal*, 1-6 page, June 27, 1914, p. 1472.

E. W. Breyer has been employed as an expert by the Ohio Public Utilities Commission to prepare a system of depreciation charges for public utility companies. Mr. Breyer does not employ the word "depreciation" in his system, but rather contemplates the creation of reserves by contemporaneous charges to the operating expense to defray what he terms "extraordinary maintenance, deferred upkeep and contingencies," which, taken together, include the charges generally accepted as coming under depreciation. By the term "extraordinary maintenance" Mr. Breyer contemplates repairs of an extensive nature, but something less than the replacement of an entire unit of buildings or machinery. Such a charge would accrue through deterioration for a long period of time. "Deferred upkeep" would mean the necessary replacement of complete units, retired by inadequacy, advancement in the arts or because of becoming obsolete. "Contingencies" contemplates extraordinary losses occasioned by fires, floods, earthquakes or storms. The corporations would act as trustees of the funds accumulated for these purposes, as representing trust funds paid in advance by the public. It is contemplated that such funds be used for working capital or for financing extensions and improvements temporarily. Interest must be paid and evidence of indebtedness executed when the funds are used for purposes other than those for which they were established.

MUNICIPALITIES

830—Public Ownership.

GOVERNMENT OWNERSHIP, by ARTHUR W. BRADY. Address at the C. E. R. A. Convention at Toledo on June 25 and 26. *Electric Railway Journal*, 2½ pages, June 27, 1914, p. 1455.

The determination of the important question of public ownership of railroads would determine also the policy on the general question of public ownership which this country would adopt for other public utilities. So far as the matter has received attention at all it may be said that sentiment in favor of operation of steam railroads by the federal government has been growing, and important steps have been taken in that direction. The situation must be faced in the near future. Federal ownership of railroads would mean that the financial affairs of the government would be quadrupled, and that expenses would be trebled, without regard to the interest on the money invested. The effect on the present government bonds and the loss in government taxes are to be considered. The government can not carry on any business with the same degree of economy and efficiency as obtains under private operation. Government ownership has proved successful in other countries, but that is no proof that it would be adapted to a government under democratic control and to the conditions in this country. Politics would govern operations, and it would be necessary to guard against graft. It is to the interest of all as citizens to settle the question of government ownership and to settle it right. If there was a mistake it would be exceedingly costly to withdraw from the results of the error.

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RATE RESEARCH



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Rate Research

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Rate Research

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RATES

THE FORM OF ELECTRIC RATES

By *William J. Norton*. Extracts from an Address to the Michigan Section of the National Electric Light Association, June 17, 1914.

510—Forms of Rates.

Rate making for the sale of electricity is not a theory. It is an art.

Elements of Rate Making.

There are but three basic elements which should enter into the form of electric rates:

1. Quantity.
2. Demand.
3. Customer Expense.

Quantity.

The element of quantity is found in all rates, either in a simple form, as in the meter rate, or in an estimated quantity, as in the flat rate.

Demand.

The element of demand in electric rates is based upon the individual consumer's responsibility for the investment of the central station which stands ready to serve such customer. Demand may be measured by instrument, estimated as a percentage of connected load, by the use of statistics originally based upon measurement, or it may be based upon other functions of the customer's use or of the customer's premises.

Customer Expense.

This is a minor element in rate making, and represents the cost to the company for such charges as meter reading, billing, postage, book-keeping, etc., and bears no relation to either the quantity used or the demand of the customer upon the station.

Rate Elements in the Simple Rate Form.

The effect of these three rate elements upon the form of electric rates is best illustrated by the following table which shows exactly the ele-

ments that enter into the usual forms of rates in the way of charges for quantity, demand or customer expense.

The Simple Rate Forms.

Meter Rates	Customer	Demand	Energy
Straight Line Meter Rate.....	E
Step Meter Rate.....	e
Block Meter Rate.....	e
Customers Output Rate.....	x

Demand Rates	Customer	Demand	Energy
Flat Demand Rate.....	{	D d	..........
Wright Demand Rate.....	.....	.....	e (d)
Hopkinson Demand Rate.....	.....	D	E
Block Hopkinson Demand Rate....	{	D d d	e E e
Three Charge Rate.....	{ C c	D d	E E e

"C" means that the rate includes a fixed customer charge of the same amount for all customers, regardless of size.

"e" means that the rate includes a customer charge that varies for customers different size.

"D" means that the rate includes a demand charge of constant amount per unit of demand.

"d" means that the rate includes a demand charge which varies in amount per unit of demand according to amount of demand.

"d" means that the rate includes a charge which is a function of the use of demand.

"E" means that the rate includes an energy charge of constant amount per unit of energy.

"e" means that the rate includes an energy charge which varies in amount per unit of energy according to the amount of energy used.

"x" means that the rate includes a charge which is a function of the output of some commodity which theoretically bears some direct relation to the quantity used.

The accepted forms of electric rates may be divided into two main classes:

Meter Rates.

Demand Rates.

Meter Rates.

There are four types of Meter Rates:

1. Straight Line Meter Rate.
2. Step Meter Rate.
3. Block Meter Rate.
4. Customers Output Rate.

DEFINITIONS AND EXAMPLES.**Meter Rates.**

Definition. The term "Meter Rate" is applicable to any method of charge for electric service which is based solely upon **quantity**. The quantity is expressed in units; as, kilowatt-hours of electricity used tons of ice made, gallons of water pumped, etc.

Straight Line Meter Rate.

Definition. The term "Straight Line" as used in connection with a meter rate indicates that the price charged per unit is constant, i. e. does not vary on account of any increase or decrease in the number of units.

Calculation. The total sum to be charged is obtained by multiplying the total number of units by the price per unit.

Instruments. Integrating meters or graphic meters are used.

Example. 10 cents per kilowatt-hour.

Step Meter Rate.

Definition. The term "Step" as used in connection with a meter rate indicates that a certain specified price per unit is charged for all or any part of a specified number of units, with reductions in the price per unit based upon increases in the number of units, in accordance with a given schedule.

Calculation. The total sum to be charged is obtained by multiplying the total number of units by the price applying to this number of units; or by multiplying the total number of units by a primary price and deducting the discount applying to this number of units; in accordance with a given schedule of discounts.

Instruments. Integrating meters in graphic meters are used.

Example.

12 cents per kilowatt-hour for from	1 to	50 kilowatt-hours' use per month.
10 cents per kilowatt-hour for from	51 to	100 kilowatt-hours' use per month.
9 cents per kilowatt-hour for from	101 to	150 kilowatt-hours' use per month.
8 cents per kilowatt-hour for from	151 to	200 kilowatt-hours' use per month.
7 cents per kilowatt-hour for from	201 to	300 kilowatt-hours' use per month.
6 cents per kilowatt-hour for the excess over	300	kilowatt-hours' use per month.

Block Meter Rate.

Definition. The term "Block" used in connection with a Meter Rate indicates that a certain specified price per unit is charged for all or any part of a block of such units, and reduced prices per unit are charged for all or any part of succeeding blocks of the same or a different number of such units, each such reduced prices per unit apply only to a particular block or portion thereof.

Calculation. The total sum to be charged is obtained by multiplying the number of units in the first block by the price per unit for that block, and adding thereto the number of units in the second block times the price per unit for that block and so on until the sum of the units falling within the different blocks equals the number of units to be charged for.

Instruments. Integrating meters or graphic meters are used.

Example.

10 cents per kilowatt-hour for the first	15 kilowatt-hours' use per month.
8 cents per kilowatt-hour for the next	85 kilowatt-hours' use per month.
6 cents per kilowatt-hour for the next	100 kilowatt-hours' use per month.
5 cents per kilowatt-hour for the next	300 kilowatt-hours' use per month.
4 cents per kilowatt-hour for the next	500 kilowatt-hours' use per month.
3 cents per kilowatt-hour for the next	1,000 kilowatt-hours' use per month.
2 cents per kilowatt-hour for the excess over 2,000 kilowatt-hours' use per month.	

Customers Output Rate.

Definition. The term "Customer's Output Rate" is applicable to any method of charge for electric service based upon the customer's output of a certain definitely named commodity. The unit of customer's output may, for example, be a gallon of water pumped, a barrel of flour manufactured, or a ton of ice made.

Calculation. The total sum to be charged is obtained by multiplying the number of units of output by the price per unit. Such a rate may also be in the form of a "Block Rate" or a "Step Rate."

Instruments. Integrating meters, scales or other measuring instruments are used.

Example.

6 cents per ton of ice made.
(This is a rate received by an ice plant in a large city.)
2 cents per 1,000 gallons of water pumped.
(This rate is applicable for pumping water from artesian wells under average conditions.)

The **Straight Line Meter Rate** needs no explanation, as it is the simplest of all rates, but as the Wisconsin Railroad Commission has stated, "this rate can be satisfactory only where all of the customers have about the same demand or installation and use the current about the same length of time each day. Where there are great variations, both in the demand and hours' use, on the other hand, then the straight

line meter rate is likely to be discriminatory against either the long or the short hour customers."

The **Step Meter Rate** has in the past been quite popular, owing to the fact that each bill is calculated at a single rate, and it has therefore simplified matters for both the sales and billing departments. It is fundamentally an improper rate, however, because the amount of charge for a greater number of kilowatt-hours in many instances is less than the amount which may be charged for a less number of kilowatt-hours. I think it is a fair statement that twenty-five per cent of the schedules in existence at the present time contain one or more rates of this character, and an example which came to my attention some time ago showed the defects of this rate in its most exaggerated form. In one month the company, under a step rate, charged a customer for 951 kilowatt-hours \$28.53 and the next month for 1,051 kilowatt-hours the charge was \$21.02. That is the customer paid \$7.51 more for 100 less kilowatt-hours. Perhaps the worst feature of this rate is that unless the company has established its rate upon such a basis, it is practically impossible to restore rates to a proper basis without either making very substantial reductions which tend to impair the income or else raising the rates of some individual customers.

I think it is fair to say that many of the companies would abolish the step rate if it were not for this fact, and the general feeling against raising the rates of any customer has deterred the companies from making a change to a more rational basis.

In this connection it is interesting to note that the commissions as a rule, have condemned this type of rate, and on the whole they have been of great assistance to the companies in making the change to a proper basis. The following extract from a letter from a commission to one of the companies bears upon the case in point:

"In making a comparison of rate schedules, I find yours among those which are open to criticism. It is recessive, that is, it violates the long and short haul principle. For example, an actual bill of \$4.90 calls for \$4.41 if for lighting and \$3.92 if for power, while a bill for \$5.10 calls for only \$4.33 if for lighting and \$3.57 if for power, and a bill for \$9.90 calls for \$8.41 if for lighting and \$6.97 if for motor, while a bill for \$10.10 calls for only \$8.08 if for lighting and \$6.06 if for motor," etc.

In this case the steps are arranged as a series of discounts which were granted if bills were promptly paid, and the commission further pointed out that discount for quantity should be divorced from the prompt payment requirement.

The **Block Meter Rate** is certainly the best of the meter rates, and in general it attempts to provide certain blocks which correspond in general averages to rates of the demand type. It certainly fails, however, to give the small but long hour customer a rate as low as he is entitled to, and on the other hand, it gives to the large short hour customer a discount to which he is not entitled.

The general simplicity of the rate and the ease with which it is understood by the customers are the reasons for its adoption by many companies, especially for retail lighting, and on the whole it has given satisfactory results.

The Customer's Output Rate. This rate has been tried many times, but on the whole with very little success, and it generally results in a customer's obtaining service at an unduly low rate, and as there is no inclination on the part of most customers to protect the company, the rate has a tendency to cause waste. A rather interesting example of this rate came to my attention some time ago, where a large company made a contract renewable for five years with a flour mill, the rate being based upon the output of the mill. By the terms of the contract, the actual rate was subject to revision based upon the results of the first two months' operation. The customer, realizing the situation, maintained a very busy flour mill for those two months and the rate was established for a very high load factor. In none of the succeeding months, however, has the output anywhere nearly approximated the original two months, and the company now looks forward to serving this customer at a loss for the next eight years.

COMMISSION DECISIONS

NEVADA

720—Rate Schedule.

COMPLAINT V. TRUCKEE RIVER GENERAL ELECTRIC COMPANY, Alleging Excessive Rates For Electric Power. Decision of the NEVADA PUBLIC SERVICE COMMISSION, Fixing Rates. May 27, 1914.

Upon investigation, the commission ordered the company to put in effect, on or before the first day of July, the following schedule for power service:

POWER SCHEDULE.

Schedule No. 1.

For power and all other purposes, connected "Lighting Load" not to exceed 10% of "Other Connected Load."

Rate.

4.5 cents per kilowatt-hour for the first	300 kilowatt-hours use per month.
4 " " " " " next	300 " " " "
3 " " " " " "	400 " " " "
2 " " " " " "	1,000 " " " "
1.8 " " " " " "	8,000 " " " "
1.7 " " " " " "	10,000 " " " "
1.6 " " " " " "	30,000 " " " "
1.5 " " " " " "	for all excess use per month.

Additional charges of \$1.25 per month per average maximum tested horsepower input to each hoist motor, when operating at full speed with load.

Discount.

10% of all of the rates of this date of issue when customer uses current and company meters current at 2,200 volts or when customer furnishes high-tension transformers and company meters current on low-tension side of transformers.

Prompt Payment Discount.

10% when bill is paid on or before the 15th day of the month next following that for which bill is rendered.

Minimum Charge.

\$1.10 per rated horsepower motors installed except motors used for hoisting purposes.

Term of Contract.

Not less than one year.

Schedule No. 2.

For Prospectors and Other Small Power Users.

For power and all other purposes, connected "Lighting Load" not to exceed 10% of "Other Connected Load."

Rate.

5	cents per kilowatt-hour for the first	300 kilowatt-hours use per month.
$4\frac{1}{2}$	" " " " next	300 " " " "
$3\frac{1}{4}$	" " " " "	400 " " " "
$2\frac{1}{4}$	" " " " "	1,000 " " " "
2	" " " " " all excess use per month.	

Discount.

10% on all of the rates of this date of issue when customer uses current and company meters current at 2,200 volts, or when customer furnishes high-tension transformers and company meters current on low-tension side of transformers.

Prompt Payment Discount.

10% when bill is paid on or before the 15th day of the month next following that for which bill is rendered.

Minimum Charge.

25 cents per connected horsepower of motors.

Schedule No. 3.

For Any and All Purposes.

Rate.

7	cents per kilowatt-hour for the first	150 kilowatt-hours use per month.
$6\frac{1}{2}$	" " " " next	100 " " " "
6	" " " " "	100 " " " "
$5\frac{1}{2}$	" " " " "	100 " " " "
5	" " " " "	100 " " " "
$4\frac{1}{2}$	" " " " " all excess used per month.	

Minimum Charge.

\$1.00 per month per meter.

Schedule No. 4.**For Irrigation Purposes.**

Power not to be used between the hours of 6 to 11 P. M. daily and only during the months from April to October, inclusive, of each year. Power to be supplied and metered at 2,200 volts or supplied at transmission voltage and metered on the low-tension side of consumer's high-tension transformers.

Rate.

1.7	cents	per	kilowatt-hour	for	the	first	5,000	kilowatt-hours	use	per	month.
1.5	"	"	"	"	"	"	next	5,000	"	"	"
1.3	"	"	"	"	"	"	"	20,000	"	"	"
1.2	"	"	"	"	"	"	"		all	excess	use per month.

Prompt Payment Discount.

10% on the above rates when payments are made on or before the 15th day of the month next following that for which the bill is rendered.

Minimum Charge.

\$3.00 per season per rated horsepower of motors connected, or per rated installed capacity of high-tension transformers figured in kilovolt amperes, if they exceed by 50% the rated capacity of motors connected.

Term of Contract.

Not less than five years.

Schedule No. 5.**For Large Reduction Works.**

For consumer controlling reduction works which run twenty-four hours a day, also for mines which are controlled by the same party that controls such reduction works, and those outputs are treated at such reduction works. Current to be furnished and metered at 2,200 volts, or furnished at transmission voltage and metered on low-tension side of consumer's high-tension transformers.

Rate.**Demand Charge.**

\$2.25 per month for average maximum tested horsepower input to each hoist motor.

Energy Charge.

1.07 cents per kilowatt hour for current consumed.

Prompt Payment Discount.

10% on the above rates when payments are made on or before the fifteenth day of the month next following that for which the bill is rendered.

Minimum Charge.

\$1.00 per rated horse power of motors connected and not less than \$500.00 during the months of April to November, inclusive, except that the minimum may be discontinued for such period of time during which no current is used, provided the consumer gives 60 days' written notice.

Schedule No. 6.**Supplement to Above.**

For power and all other purposes, "Connected Lighting Load," not to exceed 10% of "Other Connected Load." Plant to run twenty-four hours a day and such

motors that run less than twenty-four hours a day are not to be run between the hours of 5 P. M. to 10 P. M. daily, during the months of November to March, inclusive. Current to be furnished and metered at 2,200 volts, or furnished at transmission voltage and metered on low-tension side of consumer's high-tension transformers.

Rate.**Demand Charge.**

\$2.25 per month per average maximum tested horsepower input to each hoist motor when operating at full speed with load.

Energy Charge.

1.2 cents per kilowatt-hour for the first 50,000 kilowatt hours' use per month.
1.0 cents per kilowatt-hour for all excess use per month.

Prompt Payment Discount.

10% on the above rate when payment is made on or before the fifteenth of the month next following that for which bill is rendered.

Minimum Charge.

\$1.00 per rated horsepower of motors connected and not less than \$500.00.

Term of Contract.

Not less than five years.

MASSACHUSETTS**616.1—Street Lighting.**

COMPLAINANT VS. ELECTRIC LIGHT AND POWER COMPANY, Alleging that the Price for Street Lighting Service in Rockland (pop. 6,928) is Excessive. Decision of the MASSACHUSETTS BOARD OF GAS AND ELECTRIC LIGHT COMMISSIONERS, Fixing Rates. May 29, 1914.

600—Rate Differentials.

In the effort to determine a separate and distinctive price for street or commercial service, while care should be taken that the commercial service should not be required to carry the burden of the street lights or that street lights should not be made unduly high for the benefit of the commercial rates, it is, nevertheless, unnecessary, in order to avoid this, to undertake a precise determination of the separate cost of street lights as such, or that of any particular division of the commercial service or of the cost of service to one town wholly apart from its cost in the other towns or cities served by the company. The attempt to do something of the kind is not unusual, but the Board has been obliged in other cases to decide that such a course seems neither necessary nor desirable. Any such determination must necessarily depend upon many assumptions and theoretical considerations, and, while they may be of some importance or may throw some light upon the main question, they cannot in the present development of the business be of themselves, and alone conclusive. . . .

623—Load Factor.

It is quite obvious that certain portions of the plant are devoted exclusively to street lighting; that certain items of operation are incurred solely for this purpose, and, relative to the amount of electricity used, the investment per unit may be greater for street than commercial lighting. Yet, on the other hand, street lighting has a far better load factor than most of the company's customers, especially those paying only the maximum net price. And hence, where certain differentials are offered, as is done by this company, to private consumers in recognition of the importance of the load factor in making rates for service, street lighting should not have this consideration entirely ignored when its price is to be determined. It may not be easy to assess this advantage with precision in a particular case, but the Board is satisfied, from its investigation of numerous cases, that it may go far to offset, if it does not entirely cancel, the effect of the additional fixed charges and operating expenses which may be attributed to street lighting.

The Board recommends that on and after June 1, 1914, the rate for street lighting in Rockland be as follows:

\$14 per Lamp per year for 40-watt tungsten incandescent lamps, operated on a moonlight schedule of approximately 2000 hours a year, so long as not less than 390 of such lamps are supplied.

REFERENCES

INVESTMENT AND RETURN

330—Capitalization.

CAPITALIZATION OF EARNINGS, by MORRIS SCHAFF. *The Economist*, 1 page, July 4, 1914, p. 29.

This is reprinted from the issue of the *Annals of the American Academy of Political and Social Science* referred to in 5 RATE RESEARCH 139. It is said that the capitalizing not only of surpluses but of future earnings, has aroused the public to a thoughtful and serious inquiry as to its rights in these surpluses and the devotion of the monopolies' earnings. Hence the conflict now raging before the courts between the speculators in our gas and electric companies and the public, became inevitable. The stand taken by the State of Massachusetts and by the Massachusetts Gas and Electric Commission on this matter is referred to. The author holds that commission regulation cannot be successful without guarding against an excess of capital, and that rates fixed either by courts or commissions must reflect the consumers' inalienable equity in whatsoever there may be in the plant, which they directly, or society indirectly, may have contributed in the way of accretions to values.

319.1—Water Power Rights.

AN IMPORTANT SUPREME COURT DECISION ON WATER RIGHTS. Article and Editorial, *Engineering and Contracting*, 1½ pages, July 8, 1914, p. 36 and p. 25.

The decision of the Supreme Court in the San Joaquin & Kings River Canal & Irrigation Co. case, referred to in 5 RATE RESEARCH 137, is reprinted. In the

editorial various decisions by the Idaho, Nevada and California Commissions on this point are considered. The conclusion formed is that the attitude of public service commissions has been unfavorable to capitalizing the profits derived from the ownership of water rights. Therefore, the recent decision of the Supreme Court is of particular interest to companies owning water rights used or usable for power, irrigation or municipal supply. In brief, the court decision makes it compulsory to estimate water right values and to include them with the value of the rest of the property arriving at a base upon which to calculate the "fair return." Methods to be used in estimating water right values, are discussed. The "capitalized profit" method is suggested, with the use of other methods, as a check upon the reasonableness of the conclusions reached thereby. Among these other methods is the "next available source of supply method." There is a discussion of the error made by the California Commission in its criticism of the latter method in the Eureka Water Co. appraisal decision of March 23, 1914.

300—Investment and Return.

DECISION IN RATE CASE IN SPRINGFIELD MO. Article and Editorial, *Electrical World*, July 4, 1914, p. 9 and p. 1.

Like other early acts of new commissions, the decision of the Missouri commission in the Springfield case produces somewhat of a shock. In fixing a rate of return the commission bases its finding on the legal rate of interest in the State. The legal rate is applicable to loans. Loans are different from business enterprises. Even if the business enterprise is a public utility, its capital investment is not a loan. There is greater risk in investment than in loaning. The commission is acting summarily in its dealings with the holding company in this case. Charges made by a holding company to a subsidiary cannot be justified unless they are reasonable and for fair, full and plain value received, but is idle to suggest that they may be availed of only in the event of inability of the local manager to meet a situation. Any holding company that is worth its salt can give needed and good advice to a subsidiary.

PUBLIC SERVICE REGULATION

200—Public Service Regulation.

REGULATION OF UTILITIES. Editorial, *Electrical World*, July 11, 1914, p. 57.

The discussion on "State Regulation of Public Utilities" in the last number of the *Annals of the American Academy of Political and Social Science* [see 5 RATE RESEARCH 139] is criticized as dealing with the subject more from the commission than from the company point of view. It reveals the ideas of authors who in the main present the efforts and arguments of the commissions, and it merits careful study. If it had included articles by the regulated in addition to those by the regulating, it would have given a better survey of regulative conditions as a whole. One of the most interesting of the articles, by Mr. Eshleman, of California, is on the question of whether the commission should have control of the issue of securities. Mr. Eshleman answers this in the affirmative. It would have helped in solving a problem which needs much light if the negative could have been presented by an equally prominent member of a commission who thinks that the state control is unwise. No problem in regulation is more far-reaching. It is difficult to see how the state can control the issue of securities without at the same time assuming a moral if not a legal responsibility therefor. Desirable as this is for investors, the states should be fully aware of the obligations, if any, that they assume.

MUNICIPALITIES

820—State Regulation of Municipal Utilities.

MINNESOTA HOME RULE AND WISCONSIN REGULATION, by CLYDE LYN-DON KING. *National Municipal Review*, 8 pages, July, 1914, p. 564.

The Minnesota Home Rule League has not adequately supported its indictment against state regulation in Wisconsin (see 5 RATE RESEARCH 92, 208). The Wisconsin Commission and the principal of state regulation are "indicted" of ills that are in no sense attributable either to the commission or to the principle of state regulation. The league quotes John W. Bennett, "a lawyer, newspaper man, publicist and trained investigator," as authority for the statement that out of the 134 cases decided by the Wisconsin Commission from 1907 to 1912, Wisconsin's public was successful to a substantial extent in but seven per cent of the cases they brought by it for rate reduction and was given only the slightest relief in but twenty-nine per cent of the cases; while public service corporations were successful to some extent in more than ninety-six per cent of the cases they brought before the commission for rate increases, and fully or substantially successful in more than eighty-two per cent of their cases for rate increases. A survey of the decisions made by the Wisconsin commission shows that these statistics and percentages are not correct. The most telling argument used against the Wisconsin commission is its attitude toward competition. Duplication of plants and distribution systems will have to be paid for by the public in higher rates. Yet if competition is never allowed, it seems evident that slothful and inefficient management must inevitably result. Therefore, the rule of the California's commission will, in the long run, be much safer than the practice of the Wisconsin commission has been.

830—Public Ownership.

GOVERNMENT OWNERSHIP OF TELEGRAPHS AND TELEPHONES, by RUSSELL M. STORY. *National Municipal Review*, 4 $\frac{1}{4}$ pages, July, 1914, p. 621.

The report to the postmaster general on government ownership of the telegraph and telephone lines, the reply contained in the annual report of the American Telephone and Telegraph Company, and the speech of Congressman Lewis of Maryland on this subject, are reviewed. It is stated that the contentions of the president of the American Telephone and Telegraph Company are interesting but not conclusive. They might well be supplemented with a volume of statistics that would be of value, inasmuch as it is asserted that those in the government volume "have little or no real value." Nor are the contentions of Mr. Lewis in the third of the publications cited above in regard to the public-service motive, the operative efficiency and the benefits that would follow postalization fully met. The report of the post office department's committee may not be complete, and, indeed, there are some things which it seems to have failed to give due consideration, but their report cannot be deemed valueless. On the contrary, their work has been fairly well performed and, supplemented as it is by the work of Mr. Lewis, is worthy of a wide public consideration in addition to that which it has received at the hands of the Bell companies.

840—Municipal Operation.

THE MUNICIPAL RAILWAYS OF SAN FRANCISCO, by E. A. WALCOTT. *National Municipal Review*, 2 $\frac{3}{4}$ pages, July, 1914, p. 554.

The results of the operation of San Francisco's municipal railway system show a fair degree of success for municipal operation. Curiously enough the municipal statement attempts to show a net profit from the road of \$85,345.80 by adding to the true net profit of \$45,304.47 the items of taxes and cost of services rendered

by other departments. As these items are set aside as a replacement of loss to the public treasury through deprivation of revenue by public ownership, or expenses incurred on behalf of the road and paid for by funds charged to other departments, it is rather strange that they should be put forward as profits to the public through public ownership. The service on Geary Street has been much improved by the city's line, and this has had an effect of stimulating similar improvements on the parallel lines of the United Railroads. The municipal service has not, however, had any noticeable effect in eliminating the "straphangers."

800—Municipalities.

SEVEN YEARS OF MUNICIPAL FINANCE IN PHILADELPHIA. *Citizen's Business*, December 11, 1913, 20 pages.

An analysis is given of the receipts and expenditures of the city since 1903. During the past four years, the average annual deficit has been \$1,160,000. Various diagrams, tables and curves are given, to show (1) that the city has been living beyond its income; (2) that the debt has increased much more rapidly than the revenue available for meeting the debt service; (3) that the rate of increase in expenditure must be lowered, or the rate increase in receipts raised.

The above magazine is issued weekly by the Bureau of Municipal Research of Philadelphia.

820—State Regulation of Municipal Utilities.

COMBINATION OF CITIES AGAINST PUBLIC UTILITIES. Article and Editorial, *Electrical World*, July 4, 1914, p. 4 and p. 1.

The movement inaugurated by the mayors of several cities for a conference of municipal officials to consider public utilities, is discussed. It is said that in most localities state regulation has supplanted city regulation. The reason why this is so is that state regulation is better for the interests of the people as a whole than is city regulation. To the extent that the proposed combination of mayors tries to weaken the power of state regulation, it will be an undesirable organization. The public desire at this time is for state regulation, and every opportunity should be given to test the ability of this power in government to solve fairly the problems between companies and public. To the extent that the mayors combine merely for the purpose of presenting the interests of their constituents fairly before commissions and of seeking by proper non-political means all of the facts in reference to public utility properties the combination will work toward a desirable end.

GENERAL

980—Public Relations.

THE QUESTION OF PUBLIC RELATIONS, by THOMAS N. McCARTER. An Address Delivered at Toledo, Ohio, June 25, 1914. *Electric Railway Journal*, 3¼ pages. July 4, 1914, p. 11.

A review of the three points of fare, franchise, and municipal ownership is given. With reference to fair rate of return, it is said that there should be no extraordinary or improper return, but the return should always be substantial and above the legal rate of interest. Otherwise the investors who have some idea of the annoyance and responsibility of this work, would leave their money in a savings bank or take a mortgage on real estate, and leave the troubles of this business for someone else. It must be sufficient to attract capital. It must be sufficient to keep the property developed up to the needs of the city, and by and large, it should never be less than

8 per cent on the value of the property devoted to the public use. Otherwise capital will flow elsewhere into different channels with less hazard. Any community that seeks to pare down the return below this point hurts not only the traction company but more especially itself. The statement is made that the principle of a short term franchise is all wrong. It is uneconomical and unsound. If this franchise question did not come to a head with such periodic frequency, but went on either indeterminately, or so that the amortization would be spread over a long period of years and not fall so heavily upon the present generation, it would be better for all concerned. It is asserted that municipal government in America has been a failure and that it is unwise to turn over to those officials who have already made a failure of almost everything they have undertaken, the burden of the operating of public utilities.

COURT DECISION REFERENCES.

382—State Taxation.

PEOPLE ex rel GENESEE LIGHT & POWER Co. v. SOHMER, State Comptroller. Decision of the NEW YORK SUPREME COURT, APPELLATE DIVISION, THIRD DEPARTMENT. May 6, 1914. 147 N. Y. Supp. 726. Section 186 of the Tax Law of New York (Consol. Laws, c. 60) imposes a tax upon the gross earnings of gas, water and electric companies, and provides that the term "gross earnings" means all receipts from the employment of capital without deduction. This decision holds that, under this law, an electric light company is not entitled to have deducted from its gross receipts the amount paid by it to another corporation for the electricity furnished, notwithstanding the fact that such amount enters into the gross earnings of the selling corporation and is taxed against it.

314.22—Franchises.

STATE ex rel. BEALS, Co. Atty., vs. CITY OF STAFFORD, et al. Decision of the SUPREME COURT OF KANSAS. May 9, 1914. 140 Pacific 868.

This is a suit to enjoin the city of Stafford and its officers from purchasing the light plant, or the material composing the plant, of the Larabee Light & Power Company, and also from using the funds derived from bonds authorized by a vote of the electors of the city, and issued for the purpose of constructing an electric light plant, and to require the officers to restore to the special light fund the money wrongfully taken therefrom.

The city paid \$14,000 for the plant in question. The Court holds that \$2,200 of this amount was allowed for the unexpired franchise, and sets this part of the sale-contract aside.

226—Service.

SEI v. WATER SUPPLY CO. OF ALBUQUERQUE. Decision of the SUPREME COURT OF NEW MEXICO. April 28, 1914. 140 Pacific 1067.

This holds that a rule adopted by a water supply company which provides that all bills shall be paid monthly, within a reasonable time after they become due, and, in case such payment is not so made, the water will be turned off for non-payment and a charge of \$1 made for turning off and turning on the same, is reasonable and not discriminatory, and may be enforced by the company.

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July 22, 1914

No. 17

RATE RESEARCH



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Rate Research

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Rate Research

Vol. 5

CHICAGO, JULY 22, 1914

No. 17

For statement of facts and opinions contained in papers abstracted herein, the Association does not hold itself responsible

RATES

THE FORM OF ELECTRIC RATES

By *William J. Norton*. Extracts from an Address to the Michigan Section of the National Electric Light Association, June 17, 1914. Begun in 5 RATE RESEARCH 243.

DEMAND RATES.

510—Forms of Rates.

Definition. The term "Demand Rate" is applicable to any method of charge for electric service which included a charge which is based upon, or is a function of the use of maximum demand during the given period of time. The demand is expressed in such units as kilowatts, or horse-power.

Flat Demand Rate.

Definition. The term "Flat Demand Rate" is applicable to any method of charge for electric service which is based upon the customer's installation of energy consuming devices. Sometimes this type of rate is nominally so much per customer per year or per month for each of various classes of customers, but estimated demand (and quantity of energy likely to be used) play an important part in the determination of the class. Such a rate may be modified by the "Block or Step" method or features.

Instruments. No measurement of quantity of energy used is made. The demand may be measured by maximum demand instruments, by test, inspection, or may be estimated. Maximum demand in some cases is controlled by limiting devices.

Example. In the "Flat Demand Rates" below the charge is a demand charge of constant amount per cent of demand.

\$1.00 per month for each 50 watts of installation connected,

or

\$25.00 per year for each horse-power, or fraction thereof, of the connected load

or

\$40.00 per year for each kilowatt, or fraction thereof, of the maximum demand.

In the following "Flat Demand Rates" the charge is a demand charge which varies in amount per unit of demand according to the amount of demand.

EDITORIAL NOTE.—All indented matter is direct quotation.

\$1.00 per month for each 50 watts for the first 500 watts of installation connected.

\$0.75 per month for each 50 watts in excess of 500 watts of installation connected.

OR

\$25.00 per year per horse power for the first 200 horse power of connected load.

\$20.00 per year per horse power for the excess over 200 horse power of connected load.

Wright Demand Rate.

Definition. The term "Wright Demand Rate" is applicable to that method of charge in which a maximum rate is charged for a certain amount of energy, and one or more lesser charges are made for the balance used on the block principle, in accordance with a schedule which is based upon the length of use of the maximum demand, as measured or estimated.

Calculation. The number of kilowatt-hours equivalent to a given number of hours' daily or monthly use of the maximum demand is determined. The total sum to be charged is then found by multiplying the number of kilowatt-hours in the first block by the price per unit for that block, and adding thereto the number of units in the next block times the price per unit for the second block, and so on until the sum of the units falling within the different blocks equals the number of units to be charged for.

Instruments. "Quantity" is generally measured by watt-hour meters. Demand may be measured by maximum demand instruments, graphic instruments, or it may be estimated.

Example.

12 cents per kilowatt-hour for electricity used equivalent to or less than the first 30 hours' use per month of the maximum demand in the month.

6 cents per kilowatt-hour for all electricity used per month in excess of the equivalent of 30 hours' use of the maximum demand.

In addition to the primary and secondary rates a third rate may be introduced as given in the following example of a Wright Demand Rate.

10 cents per kilowatt-hour for electricity used equivalent to or less than the first 30 hours' use per month of the maximum demand in the month.

5 cents per kilowatt-hour for additional electricity used equivalent to or less than the next 30 hours' use per month of the maximum demand.

3 cents per kilowatt-hour for all electricity used per month in excess of the equivalent of 60 hours' use of the maximum demand.

Fourth, fifth, etc., rates may be introduced in a Wright Demand Rate.

Hopkinson Demand Rate.

Definition. The term "Hopkinson Demand Rate" is applicable to that method of charge for electric service which consists of a *demand*

charge, a sum based upon the actual or estimated capacity of demand of the customer's installation, plus *energy charge*, a sum based upon the quantity of energy used.

Calculation. The total sum to be charged is obtained by multiplying the demand in kilowatts by a fixed price per kilowatt, and adding thereto a sum obtained by multiplying the total number of kilowatt-hours used by the price per kilowatt-hour.

Instruments. The quantity may be measured by an integrating meter.

Maximum demand may be measured by a Wright Demand indicator or by other demand instruments, or assessed as a percentage of the connected load, etc.

Quantity and demand may both be measured by a graphic meter.

Example.

Demand Charge.

\$48.00 per year per kilowatt of maximum demand.

Energy Charge.

6 cents per kilowatt-hour.

Block Hopkinson Demand Rate.

Definition. The term "Block Hopkinson Demand Rate" is applicable to any method of charge for electric service in which the charge made to the customer consists of a demand charge and a series of energy charges arranged on the block principle; or a series of demand charges and energy charges both of which are arranged on the block principle. Where either a series of demand or energy charges enters the rate, they may be arranged in two or more blocks.

Calculation. The total sum to be charged is obtained by multiplying the number of kilowatt-hours of demand in the first block by the price per unit of that block, and adding thereto the number of kilowatts of demand, and in the second block times the price per unit in that block; and so on until the sum of the kilowatts falling within the different blocks equals the number of kilowatts of demand to be charged for. To this is added the sum obtained by multiplying the number of units of energy in the first block by the price per unit for that block, and adding thereto the number of units in the second block times the price per unit for that block; and so on until the sum of the units falling within the different blocks equals the number of units to be charged for.

Instruments. The instruments used are the same as used in the "Hopkinson Demand Rate." (See above.)

Example.**Demand Charge.**

\$2.40 per month per kilowatt for the first 50 kilowatts of the maximum demand in the month.

\$2.00 per month per kilowatt for the excess of the maximum demand over 50 kilowatts.

Energy Charge. (Being an additional charge for all electricity used.)

5 cents per kilowatt-hour for [the first 1,000 kilowatt-hours of consumption in any month.

3 cents per kilowatt-hour for the next 4,000 kilowatt-hours of consumption in any month.

1 cent per kilowatt-hour for the excess consumption in the month over 5,000 kilowatt-hours.

Three Charge Demand Rate.

The term "Three Charge Demand Rate" is applicable to that method of charging for electric service which consists of a *customer charge*, a charge per customer or per meter, plus a *demand charge*, a sum based upon the actual or estimated capacity or demand of the customer's installation; plus *energy charge*, a sum based upon the quantity of energy used.

Calculation. The total sum to be charged is obtained by adding a fixed charge per customer per month (or per year) to the demand and energy charges, which are calculated in the method described in the "Hopkinson Demand Rate."

This rate may be in the block form as the "Block Hopkinson Demand Rate," but in practice it is generally in the simple form.

Demand Rates. The demand rates may thus be divided into five general classes:

1. Flat Demand Rate.
2. Wright Demand Rate.
3. Hopkinson Demand Rate.
4. Block Hopkinson Demand Rate.
5. Doherty or Three-Charge Rate.

The writer being personally an advocate of demand rates, you will not be surprised to learn from him that any of the types of demand rates are good rates.

Flat Demand Rate.

A year or so ago, I would certainly have said that the flat demand rate was antiquated and out of date and should not be used, but in the last year the development of this type of rate for small residence customers, especially as shown by Mr. S. E. Doane, in his very interesting investigation in Europe, have brought this rate again to the front as a particularly desirable type of rate.

Last year in a conversation with Mr. Arthur Wright of England, my attention was again called to the flat rate, and Mr. Wright stated that it was his belief that the small customer's demand, and demand only, was a better measure of the small customer's use of electricity, in his opinion, that quantity, and that he further believed that as lamp efficiency developed, demand only, would be a more satisfactory basis of measurement and certainly more economical than both demand and quantity as originally introduced in the rate which bears his own name.

The Wright Demand Rate. On the whole for small users the Wright Demand Rate is the most satisfactory type of rate which we have today. There is of course considerable controversy over whether demand should be measured, estimated as a function of the connected load, based directly upon the sockets connected, or appear in the rate as a function of the number of rooms or floor area, but which ever side of this controversy you may take, there remains the general excellence of this type of rate and its value is becoming more generally recognized from day to day.

The Hopkinson Demand Rate. For large business, the rate proposed by Dr. John Hopkinson as early as 1892 is undoubtedly the best type of rate, and even the companies which refuse to introduce demand into the rates for the smaller customers are forced to admit that this type of rate is more satisfactory than any other with their larger customers.

Doherty or Three Charge Rate. This rate proposed by Mr. H. L. Doherty in 1900, and while it is theoretically the most correct of all the rates, has in general proven too complicated for its general adoption, and many companies feel that its intricacies are incomprehensible to the average customer. It has lost favor during the last ten years but occasionally we see an energetic company surmounting all of the obstacles by explaining with great care to its customers its reasonableness and meeting with deserved success in its application.

A Plea for the Simple Form.

In the nine simple rate forms outlined above, seven are distinctly good, and two, one the step meter rate and the other the customer's output rate, are bad.

Personally I feel that any rate schedule should be based absolutely upon one of these seven good types, and after the cost curve for any particular class of business has been properly determined, the company has its option of choosing one of the seven types.

It is doubtful if the companies will ever have uniform rates, as rates are entirely a function of cost and cost must vary in different localities, but it ought not to be difficult to have all of our rates established on one of the standard forms, and when so established better results are obtained by adhering closely to the standard form rather than by attempting to complicate a rate.

I would like to repeat that I consider it advisable in all cases to carefully study the cost curve, and afterwards make a proper selection of one of the seven types of good rates, selecting the type of rate which most closely approximates the cost curve. Absolutely nothing is gained by innovation and it may leave your rate schedule with inequalities which it will be extremely difficult to eradicate.

Perhaps one of the best tests of a good rate schedule is to find out whether it can be changed, and when I say changed I have generally in mind reductions, because our business is developing so rapidly that reductions are very often possible, and if such reductions can be introduced into the schedule without disturbing it, the schedule is apt to be a good one.

This can be further emphasized in another way, that is, in making the change in any rate schedule it should be made with a clear conception of, not only the immediate change but what the following changes may be, and if the rates are on one of the simple standard forms, this can generally be accomplished with ease. On the other hand, if the rates are complicated or contain steps or do not truly follow the cost curve, a change to a proper rate would be a difficult and serious matter.

In closing my remarks, I wish to call attention to the "Form and Construction of Electric Rate Schedules" adopted by the Rate Research Committee of the National Electric Light Association on April 2, 1914. This method of filing rate schedules was originally proposed by the Empire State Gas and Electric Association in 1912, and endorsed by the Rate Research Committee in the same year. It is not unfamiliar to Michigan, as your own Committee, acting in co-operation with the Michigan Railroad Commission, has adopted a form which closely follows the form of 1912.

In the last two years, however, considerable progress has been made in schedule making, and the form recommended by the Rate Research Committee embraces the experience and progress during this time, and I heartily recommend the revised form to you for your criticism and co-operation in its general adoption throughout the United States.

COMMISSION DECISIONS

CALIFORNIA

300—Investment and Return.

TOWN OF ANTIOCH V. PACIFIC GAS AND ELECTRIC COMPANY, Alleging that the Company's Rates for Electric Service are Unreasonable. Decision of the CALIFORNIA RAILROAD COMMISSION, Fixing Rates. July 6, 1914.

Before taking up the facts in this case the Commission considered

certain fundamental principles under the following heads: Basis of Return; Going Concern Value; Depreciation Reserve; and Rate of Return.

311.2—Reproduction Cost New.

The company claimed that the proper basis of return was the reproduction new value of its property plus an allowance for so-called going concern value. The Commission says:

That cases may arise in which it would be fair and equitable to give to a utility a return based on the cost of reproducing its property new is undoubtedly true. It may well be urged that where the cost of reproducing the property new is approximately the same as the investment and the utility has done its full duty in keeping its property up to 100 per cent efficiency, and has established a proper depreciation fund, the utility may justly claim a return on an estimate of reproduction new. The claim, however, that rate fixing authorities must give a return on the estimated cost of reproduction new, without consideration of any other basis, seems to me to be without warrant both in common sense and on authority.

To illustrate the unfairness of the reproduction new value as a basis for rate making, the decision quotes from the opinion of Judge Van Fleet in the San Diego Water Company case (118 Cal. 556), as follows:

"The construction of a municipal water works is a matter of growth, it is necessary in common prudence, on the one hand to construct the water works of such capacity as to satisfy the needs of a growing city, not only at the moment, but within the near future; and, on the other hand, not to extend them so much as to cast an unnecessary burden on the stockholders, or the present consumers. As such works are a necessity to the city, they must keep pace with, and to some extent anticipate its growth. When constructed they stimulate to that extent the progress of the city, and tend, like all conveniences, to lower the general cost of production of all things. It results that at least the first water system in any city occupies the position of a pioneer. At any expense the works must be constructed and usually no reward can be realized by the constructors, until some time has elapsed. It would, therefore, be highly unjust to permit the consumers to avail themselves of the plea that at the present time similar works could be constructed at a less cost as a pretext for reducing the rates to be paid for the water. The reduced expense, if it be reduced, is due in part at least to the very fact that the city has been provided at the cost of the water company with increased facilities for doing business. . . ." (Page 568.)

"Nor would it, on the other hand, be just to the consumers to require them to pay an enhanced price for the water, on the ground that it would now cost more to construct similar works. Such a contingency may well happen; but to allow an increase of rates for such reason would be to allow the water company to make a profit, not as a reward for its expenditures and service, but for fortuitous occurrence

of a rise in the price of materials or labor. The law does not intend that this business shall be a speculation in which the water company or the consumers shall respectively win or lose upon the casting of a die, and upon the equally unpredictable fluctuations of the markets." (Page 569.)

The decisions of other Commissions and courts are cited and their bearing on the question of basis of valuation is discussed. In conclusion the decision says:

It would seem that the only basis to which the Supreme Court has as yet committed itself is the value which, at the time of the inquiry, under all circumstances disclosed, is a "fair value" for the purposes of the case. What Mr. Justice Harlan said in *Smythe v. Ames*, to the effect that all the elements which enter into the problem must be considered, is still the law.

450—Value of Service Theory.

Defendant, in its brief, quotes from *Cotting v. Kansas City Stock Yards Company* 183 U. S. 79, which case, in turn, quotes from *Canada Southern Railway Company v. International Bridge Company* 8 App. cas. 723, a House of Lords case, to the effect that the reasonableness of the rate depends not upon what profit it may be reasonable for the utility to make, but on what it is reasonable to charge to the person who is charged. In its last analysis, this is simply a restatement of the claim formerly made that a utility has the right to charge what the traffic will bear. It is not necessary to give further consideration to this theory, for the reason that the Supreme Court of the United States in all its decisions, looks simply to the profit which it is reasonable for the utility to make and not to the so-called value of the service, except that what the consumer can reasonably afford to pay is the maximum limit of a fair and reasonable rate.

311.1—Original Cost.

After a consideration of these and other fine spun theories the mind of a practical man instinctively turns for first guidance to the simple question of the amount of money which has been honestly and wisely invested. While it is, of course, evident that there may be many circumstances under which the application of this basis alone would not be equitable, and that qualifications must be made as justice and equity require. It would seem to the lay mind that a rate fixing authority will not go far wrong if, in determining the basis for rates, it first ascertains the amount of money which the utility has invested honestly and with a fair degree of wisdom, in the business which it is conducting for and on the behalf of the public. As Justice Van Fleet says in the *San Diego Water Company* case, at page 569:

"For the money which the company has expended for the public benefit it is to receive a reasonable, and no more than a reasonable reward. It is to be paid according to what it has done, and not according to what others may conceivably do. In effect, the bar-

gain between the company and the public was made when the water works were constructed; and this matter is to be determined according to the state of things at that time."

Some of the necessary qualifications to this test are stated by Justice Van Fleet at Page 572, as follows:

"It should, of course, be said that it does not follow that in every case the company will be entitled to credit for all of its current expenditures, or to receive a compensation based on the entire costs of its works. Reckless and unnecessary expenditures, not legitimately incurred in the actual collection and distribution of the water furnished, or in the acquisition, construction or preservation of so much of the plant as is necessary for that purpose, cannot be allowed. * * * It is the money reasonably and properly expended in the acquisition and construction of the works actually and properly in use for that purpose which constitutes the investment on which the compensation is to be computed."

The same views were expressed by Franklin K. Lane, at that time a member of the Interstate Commerce Commission, in the *Western Advance Rate* case, 20 Interstate Commerce Commission Reports 307. Referring to the claim of the Burlington Railroad that it was entitled to a return on the entire present value of its property, including an item of one hundred and fifty million dollars of unearned increment of land, Mr. Lane, at page 339, says:

"In the face of such an economic philosophy if stable and equitable rates are to be maintained, the suggestion has been made that it would be wise for the government to protect its people by taking to itself these properties at present value rather than await the day, perhaps thirty or fifty years hence, when they will have multiplied in value ten or twenty fold."

Mr. Lane then reaches the following conclusion as the proper basis of fixing rates:

"The trend of the highest judicial opinion would indicate that we should accept neither the cost of reproduction, upon which the Burlington's estimate of value is made, nor the capitalization which the Santa Fe accepts as approximate value, nor the prices of stocks and bonds in the market, nor yet the original investment alone, as the test of present value for the purposes of rate regulation. Perhaps the nearest approximation to the fair standard is that of bona-fide investment—the sacrifice made by the owners of the property—considering as a part of the investment any shortage of return that there may be in the early years of the enterprise. Upon this, taking the life history of the road through a number of years, its promoters are entitled to a reasonable return. This, however, manifestly is limited; for a return should not be given upon wastefulness, mismanagement or poor judgment, and always there is present the restriction that no more than a reasonable rate shall be charged."

With this conclusion as establishing what will generally be the most important circumstances to be considered in ascertaining the fair value of public utility property for rate fixing purposes I heartily concur. I do so, however, with the undersanding that there must be a reasonable limit to the period during which a shortage of return may be capitalized. Otherwise, the rate fixing authority will be in the ridiculous position of holding that the greater the early losses, the greater the value of the property for rate making purposes. In concurring I also have in mind that these different tests are but aids in determining the ultimate fact, which will always be to determine on the facts of the case, what is fair and just as between the utility and its customers.

315.1—Going Value.

The Commission's holding in regard to allowance for "going concern value" may be shown by the following extracts from the decision:

It will be noted that in each of the foregoing quotations (Citations from *City of Palo Alto vs. Palo Alto Gas Co.*, California Railroad Commission Report Vol. 2, p. 310; *Thomas Monahan, Mayor of San Jose vs. San Jose Water Company*, California Railroad Commission, Case No. 476; *City of Milwaukee vs. Milwaukee Electric Railway & Light Co.*, 10 W. R. C. R., p. 1; *People vs. Wilcox*, 141 N. Y. S. 677), the basis used is that of actual expenditures, thus following the investment theory. If the reproduction value theory is followed, experts at times estimate the expenditures which would probably be made before the hypothetical or comparative plan to which they refer should have been placed upon an earning basis identical with the existing property. These estimates are largely guesswork and are most unreliable, and will be given very little weight by this Commission, particularly if evidence of the actual facts can be secured. The best evidence of what should be allowed for developing the business is the money which has actually been expended for that purpose.

While the general rule is as thus stated, certain qualifications must be made. The effort to include as "going concern value" the valuation for "good will" in cases of utilities which have, in fact, a monopoly of the business, has been definitely repudiated by the Supreme Court of the United States in *Willcox vs. Consolidated Gas Company*, 212 U. S. 19, 52, and *Cedar Rapids Gas Light Company vs. Cedar Rapids*, 223 U. S. 655, 669. It must also be remembered that if the investment has been unwisely made, or if the plant has been made larger or more expensive than necessary, deficits resulting from these causes should receive very little consideration. The effects of abnormal conditions, bad management, poor judgment, and lack of ordinary care and foresight must be borne by the utility and not by the public.

In considering this element, consideration must also be given to

profits which the utility has made in the past. It is just as unfair to ask the rate fixing authority to consider deficits alone and not profits, as it is to ask that in establishing value, appreciation be considered, but never depreciation. If the returns in the past are to be considered, the whole story should be considered and not merely a fragment thereof.

360—Depreciation.

That a utility has the right to look to its consumers for the establishment and maintenance of such fund has been directly established by the Supreme Court of the United States in *Knoxville vs. Knoxville Water Company*, 212 U. S. 1. In this case, Mr. Justice Moody, at page 13, says:

“Before coming to the question of profit at all, the company is entitled to earn a sufficient sum annually to provide not only for current repairs, but for making good the depreciation and replacing the parts of the property when they come to the end of their life. The company is not bound to see its property gradually waste, without making provision out of earnings for its replacement. It is entitled to see that from earnings the value of the property invested is kept unimpaired, so that, at the end of any given term of years, the original investment remains as it was at the beginning. It is not only the right of a company to make such a provision, but it is its duty to its bond and stockholders, and, in the case of a public service corporation, at least, its plain duty to the public.” . . .

365.2—Sinking Fund Method.

This fund, together with the interest on all moneys invested therein, is a trust fund set aside for the specific purpose of taking care of replacements, whether of worn out material or of material which has become obsolescent or inadequate, in accordance with such rules, regulations and forms of account as this Commission may prescribe. As the interest is to remain a portion of the fund, it would seem that ordinarily in this State the sinking fund basis should be used in determining the amount to be set aside annually in this fund.

The Commission admits that it is difficult to determine the proper method of providing for this fund.

However, if the allowance made for these items proves inaccurate, the necessary changes may be made by the rate fixing authority from time to time.

340—Rate of Return.

It would seem that in general the rate of return should be such rate as is high enough to secure the funds for the development of the business, and that in reaching its conclusion on this point, the Commission should be liberal in its attitude.

The Commission finds that 8% of the fair value of the company's property is reasonable in this case.

410—Cost of Service.

In order to determine a fair and reasonable rate in this case, the Commission proceeded to determine the cost of the service under two main heads: "The Cost of Production and Transmission" and "The Cost of Distribution."

The electric energy which is distributed in the town of Antioch is derived from three sources—the hydro-electric properties of Pacific Gas and Electric Company, the steam plants of that company and hydro-electric energy purchased from various other companies. The Pacific Gas and Electric Company's transmission system is a unit, so that electric energy from any of these three sources may at any time when necessary be transmitted to Antioch.

In order to determine the production and transmission cost for the service at Antioch, the Commission considered the cost of production at its hydro-electric and steam properties together with the price under existing contracts of energy purchased from other companies. In this manner is derived a cost estimate applying uniformly to the various substations of the company. The decision says:

It will be noted that the average cost of energy deliverable to substations is \$.007312 per K. W. H., and that, expressed as a "two part rate," the cost of energy deliverable at substations is as follows, based on the maximum simultaneous demand of all substations:

Demand Cost, \$20.13 per K. W.

Energy Cost, \$.003314 per K. W. H.

To this cost is added the cost of distribution as estimated for Antioch.

720—Rate Schedules.

The following rates were established for Antioch.

GENERAL LIGHTING.

Applicable to all lighting installations served from the local secondary distribution lines.

Rate:

7 cents per kilowatt-hour for the first 20 kilowatt hours used per month.

4 cents per kilowatt-hour for the next 980 kilowatt hours used per month.

3 cents per kilowatt-hour for all excess use per month.

Minimum Charge.

\$1.00 per month per meter.

COMMERCIAL AND INDUSTRIAL POWER.

Applicable to all power installations served from the local secondary distribution lines.

Rate:

For the first 50 kilowatt-hours per horse power per month:

- 7 cents per kilowatt-hour for less than 1 horse power.
- 5 cents per kilowatt-hour for 1 to 3 horse power.
- 4 cents per kilowatt-hour for 3 to 9 horse power.
- 3 cents per kilowatt-hour for 9 to 27 horse power.
- 2½ cents per kilowatt-hour for 27 to 81 horse power.
- 2 cents per kilowatt-hour for 81 horse power and over.

For the next 50 kilowatt-hours per horse power per month:

- 1½ cents per kilowatt-hour.

For over 1,000 kilowatt hours per horse power per month:

- 1 cent per kilowatt-hour.

Minimum Charge.

- \$1.00 per horse power per month for the first 10 horse power.
- 75 cents per horse power per month for all over 10 horse power.

MUNICIPAL STREET LIGHTING.

Applicable to all street and other outdoor lighting.

Rate:

- 3¾ cents per kilowatt-hour deliverable into street lighting circuits.

REFERENCES**RATES****616.1—Street Lighting**

STUDYING STREET-LIGHTING COSTS. Editorial, *Electrical Review*, July 18, 1914, p. 105.

It is a question if any subject in the field of public-utility relations so easily falls a prey to political speculation as does street lighting. The price of this service is an early target whenever a typical municipal campaign in the supposed interests of the proletariat gets under way, and probably as much misinformation is spread about on this subject as on any other which is of electrical interest from the standpoint of public affairs. The best opinion to-day seems to be that central stations should be allowed to make prices sufficient to cover the so-called fixed costs of the service, including a fair return upon the street-lighting investment, and also to meet the operating expenses and repairs of this portion of the system. The rate per kilowatt-hour should preferably not exceed the maximum net price charged private customers. In other words, where differential prices to private customers are freely made for different uses because of corresponding differences in load-factor, the city with respect to its street lighting seems entitled to like consideration. The length of contract obviously enters into this determination and nothing could be more unfair than to require a company to quote practically the same prices for a short-time as for a long-time agreement in this field, where so much of the equipment is absolutely worthless for any other service. The final price as fairly regarded from the engineering standpoint may be determined by balancing the advantages of a good load-factor against the investment and maintenance costs peculiar to the service.

400—Rate Theory.

BRITISH UTILITY MANAGEMENT. *Engineering News*, 1 page, July 16, 1914, p. 167.

Mr. A. Hugh Seabrook's recent book, "The Management of Public Electric Supply Undertakings" is reviewed. The last forty pages are devoted to rates (or "tariffs"). It is said that no one will dispute the author's proposition that the object of a tariff system is: (1) to secure an income to cover operating and fixed charges and profit; (2) to encourage increased use of electricity for all purposes and by all persons; (3) to avoid discrimination. There is one stated prime object, however, which may or may not be accepted, depending on its interpretation—this is the securing of a "proportional amount of profit from each class of consumer" (though not from each ultimate customer). The author's basis for his tariffs is not cost plus reasonable profit or fair return on fair value but is instead "the value of the service to the consumer which is settled by the price of competitors" (meaning gas or oil, etc.). It is stated: (1) "in calculating charges for a class of new business it is permissible to ignore much of the existing expenditure" with benefit to the original customers due to general decrease in cost of production with the great volume of new business and use of more modern machinery; (2) "it is not necessary that each section of the business should contribute the whole of its share of fixed charges." The author has a high opinion of the two-part scheme of charging (a—a service charge per kilowatt of maximum demand; b—an energy charge per kilowatt-hour used) and he has an unique contempt for a single part scheme.

MUNICIPALITIES**830—Public Ownership.**

GOVERNMENT OWNERSHIP OF PUBLIC UTILITIES, by COL. GEORGE W. FOSTER, *The Dallas Daily Times-Herald*, June 28, 1914, p. 7.

The arguments advanced by Walter Roscoe Stubbs, ex-Governor of Kansas, in a recent issue of *The Saturday Evening Post*, are criticized as being incompetent as arguments, but exceedingly entertaining as history, and strongly persuasive of the vital necessity of reforming the government before any more burdens of utilities control are unloaded upon it. In discussing lobbying, it is said that it is difficult to understand how a few lobbyists can dominate a whole legislature, if the lawmakers are honest—and, if they are not honest, matters are not going to be helped by placing in their hands the control of railroads. As an earnest of good intentions, suppose ownership advocates begin by taking the postoffice department entirely out of politics and have it managed as efficiently and economically as are the railroads of this country. Let the employes of the postoffices become available and in line for promotion to the position of postmaster and higher places in the service. Provide such employes with reasonably comfortable quarters and require that their working conditions shall not be less pleasant than those required for employes of privately-owned utilities. As now organized and managed, the postoffice department stands as a complete refutation of the truth of this contention that the government will successfully manage a great public utility. That it will not do so is not the fault of any particular administration, but of a system of government which has been allowed to vegetate unchanged through all administrations. The postoffice department offers the best chance for reform to-day of any function of government. Seth Low is quoted as follows: "The annual bill for the construction of public buildings for the Federal government has acquired the popular name of 'pork barrel' because it is so universally recognized that appropriations for this purpose are made to gratify local sentiment and to promote the interests of individual congressmen more than on the merits of the matter, as determined by careful inquiry. What possibility is there that a system of national railroads would be or could be carried on under our democratic government in any other spirit?"

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July 29, 1914

No. 18

RATE RESEARCH



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120 WEST ADAMS STREET - - - CHICAGO

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Rate Research

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Rate Research

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CHICAGO, JULY 29, 1914

No. 18

For statement of facts and opinions contained in papers abstracted herein, the Association does not hold itself responsible

RATES

720—Rate Schedules.

RATE SCHEDULES OF THE CENTRALIA (ILLINOIS) GAS & ELECTRIC COMPANY.

LIGHTING RATES.

Rate.

10 cents per kilowatt-hour for current consumed.

Discount.

Bills which are paid on or before the 6th day of the month succeeding the month in which the current was used, shall be discounted as follows:

10 per cent on all bills of \$24.00 to \$35.00 per month.

15 per cent on all bills of 35.00 to 50.00 per month.

20 per cent on all bills of 50.00 to 75.00 per month.

35 per cent on all bills of 75.00 to 95.00 per month.

40 per cent on all bills of 95.00 and over per month.

POWER RATES.

Rate.

10 cents per kilowatt-hour for from 0-100 kilowatt-hours' use per month.

8 cents per kilowatt-hour for from 101-300 kilowatt-hours' use per month.

6 cents per kilowatt-hour for from 301-500 kilowatt-hours' use per month.

5 cents per kilowatt-hour for from 501-750 kilowatt-hours' use per month.

4 cents per kilowatt-hour for from 751-1250 kilowatt-hours' use per month.

3.5 cents per kilowatt-hour for from 1251-2000 kilowatt-hours' use per month.

3 cents per kilowatt-hour for from 2001-3000 kilowatt-hours' use per month.

2.8 cents per kilowatt-hour for from 3001-4000 kilowatt-hours' use per month.

2.6 cents per kilowatt-hour for from 4001-5000 kilowatt-hours' use per month.

2.5 cents per kilowatt-hour for from 5001-6000 kilowatt-hours' use per month.

Discount.

A discount of 5 per cent will be allowed on bills paid on or before the 6th day of the month following that in which the current was used.

Minimum Charge.

50 cents per month per horsepower installed.

COMMISSION DECISIONS**MASSACHUSETTS****400—Rate Theory.**

COMPLAINT V. NORTHAMPTON ELECTRIC LIGHTING COMPANY, Alleging Unreasonable Rates for Light, Power and Street Lighting Service. Decision of the MASSACHUSETTS BOARD OF GAS AND ELECTRIC LIGHT COMMISSIONERS, Fixing the Maximum Rates. June 26, 1914.

450—Value of Service Theory.

Something was said at the hearings with respect to the power prices and the minimum charges of the company, especially for power. Since the hearings it has adopted a somewhat simpler power schedule with a lower base price. The Board believes that the lower base price and new schedule not only will involve no permanent loss of revenue, but may be fairly expected to result advantageously both to customers and to the company. But for reasons which have been repeatedly discussed by the Board, and therefore need not be repeated here, it has seemed undesirable upon a petition of this kind to deal specifically with any prices other than those for street lighting and the maximum net price to commercial customers. Other prices both for power and light are made chiefly from motives of commercial expediency to obtain business which cannot otherwise be secured. To the extent to which such business is strictly competitive it is able to take care of itself and needs no help from this Board. Substantially all who pay the maximum price, and the city with respect to its street lights, must buy of the company or go without electricity, and they are entitled to invoke and to receive the utmost consideration of the Board.

612—Power.

While the minimum charges for power in force may in some instances work some hardship, and might perhaps be rearranged to advantage, and, while they have little value to the company as producers of actual revenue, they tend to make a fairer adjustment of the responsibility for station loads as between customers, and should lead to decreasing average costs and so to lower prices. For these reasons the Board has not deemed it necessary to make any specific recommendations with regard to such minimum charges. * * *

Without attempting to determine the reasonableness of these rates, it is clear that those which may be offered to any one customer should be open to all who desire to avail themselves of their terms and who seek the company's service under like conditions, so that none shall enjoy any advantage, direct or indirect, not offered to all. The Board, therefore, recommends that the exclusive character of all such rates be discontinued.

729—Maximum Rate.

In view of the foregoing facts and considerations the Board recommends that on and after July 1, 1914, the maximum net price for electricity supplied by the Northampton Electric Lighting Company for any use shall not exceed 9 cents a kilowatt hour; and that the price of the alternating current 6.6 ampere enclosed arc street lamps supplied be not more than \$82 a year for those burning all night and every night, and \$68 a year for those burning every night until midnight and from 5 o'clock in the morning to daylight from November 15 to March 1; and that the price for 50-watt tungsten incandescent street lamps supplied by said company shall be not more than \$17 a year for those burning all night and every night, and \$13.50 a year for those burning on the same midnight-daylight schedule as above described for arc lamps, so long as not less than approximately the number of lamps now in use are supplied.

MARYLAND**129.1—Discrimination.**

FARMERS' ASSOCIATION OF FREDERICK COUNTY V. THE CHESAPEAKE AND POTOMAC TELEPHONE COMPANY OF BALTIMORE CITY, Alleging that Certain Rates are Discriminatory. Decision of the MARYLAND PUBLIC SERVICE COMMISSION, Eliminating Discriminations Found to be Unjust. April 23, 1914.

The petition asks that the Commission's former order in the case, issued March 2, 1914, be modified in certain particulars to eliminate alleged discriminations. The Commission discusses the matter of eliminating discriminations in telephone rates and finds that certain discriminations complained of in the case are unavoidable and not unjust. While the discussion applies largely to telephone service the following may be cited as of general interest.

These contentions raise for consideration the ever interesting question of discrimination in matter of public service.

We have heretofore had occasion a number of times to discuss and uphold the general principle of zone charges for public service of various kinds as a justification for discrimination in specific cases, and nothing we are about to say should be understood as any attempt on our part to recede from the views expressed in any of such opinions.

The term "discrimination" as used in the Public Service Commission Law is a term of broad meaning, and must be interpreted in each case reasonably and with a view to correct the evil which the legislature intended to correct when it enacted its prohibition against discrimination in telephone rates and service. That it intended that the prohibition against discrimination should be state-wide in effect is unquestionable, but it is by no means certain, and in fact could

hardly be conceived, that the legislature intended that the final test as to discrimination in the case of telephone service should depend upon the length of line used in each given case. It is true that the statutes formerly in existence would seem to have required uniformity of charges throughout the State based upon the approximate length of line alone. But when the Public Service Commission was formed the act creating that body superseded the former law on the subject and was in effect an acknowledgment by the legislature that this, as well as many other matters which had formerly been controlled by specific legislative enactments which were necessarily along broad and general lines, could best and most satisfactorily be controlled by a commission authorized and empowered to investigate and pass upon specific questions under the facts and circumstances of each particular case as it might arise. The legislature was not in a position to examine and pass upon instances of discrimination in every particular locality throughout the State. The Public Service Commission is. Therefore we feel not only that we are justified, but further, we feel it to be our duty, in passing upon questions of discrimination in public service as they arise before us, to consider all the facts and circumstances of each particular case. At the threshold of every such case we are met by the obvious desirability of accepting, in the case of telephone service, the length of line in use as an important factor in determining the relative charge to be made for its specific service. Distance between two points is a thing which always exists and is a scale of easy application to all cases. But it is by no means the only factor to be considered in determining the fairness of a charge for service, or whether discrimination does or does not exist in certain given cases.

The fundamental principle at the bottom of every prohibition against discrimination in matters of public service is that such discrimination gives one individual or community a business or pecuniary advantage over another—that the gain of the one is at the expense of the other. Hence it is that discrimination is most obnoxious and objectionable when it exists between individuals or localities who or which are in direct business competition one with the other. In such cases the gain to the one by such a preference or discrimination is at the business or pecuniary disadvantage of the other. And discrimination is least obnoxious and objectionable when it exists between individuals or localities which are not in direct business competition. For in such cases the gain to the one by such a preference or discrimination is only remotely and indirectly at the expense of the other.

MASSACHUSETTS

221.1—Issues of Stocks and Bonds.

Petition of the HAVERHILL GAS LIGHT COMPANY, For Approval of an Issue of Additional Capital Stock. Decision of the MASSACHUSETTS

BOARD OF GAS AND ELECTRIC LIGHT COMMISSIONERS, Approving the Issue in Part. June 8, 1914.

The directors of the company have fixed the price at which the new shares shall be offered to the stockholders at par. The law requires that the vote of the Board as to the amount of stock reasonably necessary shall be based on the price fixed by the directors, "unless the Board is of opinion that such price is so low as to be inconsistent with the public interest, in which case it may determine the price at which such shares may be issued."

318—Working Capital.

Included in the application was a substantial amount for the cost of additions to quick assets or working capital. Hitherto the company has never found it necessary to issue stock for this purpose. Its working capital has always been small, and it may be conceded that it may wisely be now increased. It is extremely difficult to make a rule applicable to companies generally as to the necessary amount of working capital. It will doubtless vary largely in different companies, and from time to time in the same company, dependent upon its immediate policy and purpose; that is to say, according to the particular work which it ought to do or may have in hand. This very liability to variation of working capital impels to conservation in the issuance of stock for account of it. If reasonable provision for it can be made without the creation of a permanent liability such as inheres in capital stock, so that, as working capital is reduced, the liability therefor may disappear to the same extent, every permanent interest involved will be conserved. In established and prosperous companies with an unquestioned surplus the Board has been of the opinion that working capital should be provided out of surplus or temporary debt rather than by the issue of new stock, because under such conditions the necessity for such issue is not apparent. For these reasons no provision for this item is made in this decision; but, if experience shall later prove that such reasonable necessity exists, the request for the same can then be renewed.

CALIFORNIA

140—Relations of Corporations with Each Other.

CITY OF SAN JOSE V. THE PACIFIC TELEPHONE AND TELEGRAPH COMPANY. Petition of Respondent for Rehearing of that Portion of Former Order Reducing Allowance Paid Under Its Contract with the Holding Company. Decision of the CALIFORNIA RAILROAD COMMISSION, Denying Application for Rehearing, February 4, 1914.

In the application for rehearing the defendant and certain of its stockholders entered an objection to that portion of the Commission's de-

cision, rendered October 9, 1913, which limits the American Telephone and Telegraph Company to $2\frac{1}{2}$ per cent instead of $4\frac{1}{2}$ per cent, which it secures under its contract with the Pacific Company. The Commission, in denying the petition for rehearing, finds that the allowance fixed in the previous decision is ample to cover the cost to the holding company of performing the services specified in the contract, and affirms its former conclusion that

only that amount should be allowed as a charge against the operating expenses of the Pacific Company which is a reasonable compensation for what is actually done and the lowest reasonable amount for which such service could be performed.

The Commission reached this conclusion because of the following considerations: Of course it is too well established to need citation of authority, that any improvident or extravagant expenditure made by a public utility should not be allowed in its entirety when rates are to be fixed, but only that amount which reasonably and providently should have been expended. Under the peculiar facts of this case, and, having in mind the far-reaching effect of the practice here in question, I consider it necessary to announce the position of this Commission with reference to such practices in plain and unmistakable terms.

132.1—Natural Monopolies.

Nowadays, the owners of property devoted to a public use, in a business which is what is commonly styled a natural monopoly, are urging that such natural monopoly should be protected in its field of operation from competition, on the ground that competition divides the business and duplicates the property, thus producing a necessity for higher rates. On the theory that a natural monopoly, such as a telephone company, can give better service at lower rates to its patrons when operating alone in a field than can possibly be given when a portion of its business is taken from it and more property utilized in the particular field upon which an earning shall be required, these utilities urge that they should be permitted to operate free from competition. And this theory, upon which it is urged that natural monopolies shall be protected from competition, is justified on the ground of a benefit to the public. While this theory may be ever so sound, it does not lie in the mouth of a utility representative to urge such protection on the ground that such protection is good for its patrons, when, as a matter of fact, it does not accord to its patrons the benefits such monopoly is supposed to produce. The fact that better service and lower rates usually are attendant on competition, even between natural monopolies, naturally leads to the conclusion on the part of patrons of natural monopolies that the better service and lower rates are the result of such competition. Of course, such is not the fact, because, however low the rate and however good the service may be given under competition between two agencies where one could do the work, the rate could be lower

and the service better if the one were unmolested. This, of course, is capable of mathematical demonstration, but those of us who are engaged in public utility regulation have long ago lost patience with the contention of the monopolist that his monopoly shall be protected on the ground that it affords a benefit to the public, when as a matter of fact, it brings about, and is attended by, added burdens upon the public, and too often results in management oblivious to the public welfare. Life is entirely too short to be utilized in trying to make natural monopolies do what they say they can and ought to do without competition. If their own self-interest does not lead them voluntarily to do that which they should do, they cannot long expect the public to protect them when such protection, instead of benefiting the public as patrons, rather subjects such patrons to abuses that do not exist under competition.

132—Protection from Competition.

I cannot urge too strongly upon the utilities in this State that are now protected by a certificate of public convenience and necessity, the fact that, however sound this provision is in theory, if it does not work out in practice it will be eliminated. It can only be justified in the minds of the public on the ground that it is good for the public and it can only be demonstrated that it is good for the public if, as a matter of fact, the public can be shown benefits resulting from it.

In very few cases has this Commission refused to permit competition to exist, and in those cases we are beginning to be presented with charges that the agency thus protected from competition is becoming arrogant and forgetful of the rights of the public. Self-interest apparently makes the most potent appeal, and, if utilities are to be so short-sighted that they cannot see that self-interest requires as considerate and honest treatment of their patrons when there is no competition as is accorded when competition exists, and, in addition, lower rates and better service, then some other method than regulation must be found to make them realize this fact. This results because this Commission is not, and cannot be, equipped with sufficient employees to watch every utility employee, and scrutinize every utility practice in this State.

What has just been said has a direct bearing on the case here presented, and led me to suggest to the representatives of the Pacific Company and the American Telephone and Telegraph Company that it was not enough for them to show that The Pacific Telephone and Telegraph Company, for the $4\frac{1}{2}$ per cent which it pays, secures as much or more than it could secure elsewhere, than from the American Telephone and Telegraph Company, but that the American Telephone and Telegraph Company was getting no more out of the $4\frac{1}{2}$ per cent than the amount for which it could reasonably perform the services rendered. For if such is not the case there would be brought about a result where it is attempted to justify a condition of monopoly on the part of the American Telephone and Telegraph

Company, while giving to it, the monopoly, the benefit which is supposed to be accorded to the public, and which alone could give sanction to such monopoly.

149—Holding Companies.

The Pacific Gas and Electric Company serves many localities in this State with electricity and gas. I merely take this company as an illustration because of the extent of its operations. Suppose that company, instead of dealing directly with all of the municipalities within the territory served by it, should organize companies in each of such municipalities and then organize a holding company which would own the stock or a controlling interest in the stock of these local companies, and should sell its commodity in bulk to these subsidiary agencies which it controls, and should arbitrarily fix the price, which was not the price at which the holding company could afford to produce the commodity but the price which the controlled company could be induced to pay. Under the present condition The Pacific Gas and Electric Company, in a rate-fixing inquiry, shows what it costs it to produce its commodity, but in the suggested instance such would not be the case, but the amount charged against the consumers would be that which the local company would have to pay for its electricity or gas and not the cost of production. Thus we have a condition exactly analogous to the one here, where the American Telephone and Telegraph Company controls The Pacific Telephone and Telegraph Company and various other telephone and telegraph companies throughout the United States, and performs for them certain services under contracts at rates dictated by itself. I submit that, if this condition is to be permitted to exist, what it costs the American Telephone and Telegraph Company to perform the service which it actually performs for The Pacific Telephone and Telegraph Company is the only thing which this Commission ought to consider and the only thing for which either The Pacific Telephone and Telegraph Company or the American Telephone and Telegraph Company, in the face of the relation which exists between them, has a right to contend. . . .

REFERENCES

RATES

612.4—Distribution Economies.

DISCUSSION ON SUB-COMMITTEE REPORT ON "DISTRIBUTION OF ELECTRICAL ENERGY" (JUNKERSFELD, etc.), New York, February 27, 1914. *Proceedings of the American Institute of Electrical Engineers*, 13 pages, February 25, 1914, p. 1125.

The above report is abstracted in 4 RATE RESEARCH 336. The following here contribute to the discussion; H. L. Wallau, Philip Torchio, S. D. Sprong, D. W. Roper, E. M. Hewlett, H. R. Summerhayes, John B. Taylor, E. W. Trafford, J. T. Kelly, Jr., John Murphy, H. B. Gear and Carl Schwartz.

623—Power Factor.

SYNCHRONOUS BOOSTERS IN TRANSMISSION LINES, by LEE HAGOOD. *General Electric Review*, 8½ pages, August, 1914, p. 786.

The author makes an analysis of the application of synchronous boosters to transmission lines. He has pointed out in particular that, when a synchronous booster is driven by a synchronous condenser, an ideal method is secured for deriving flexible voltage for a distribution point on a transmission system. Such voltage is independent of the system's voltage and yet does not involve the local synchronous machines in operating at undesirable power-factors, since the insertion of the booster effects a means of securing only such power-factors in the transmission line itself as is desired to meet the operating conditions.

410—Cost of Service.

HYDROELECTRIC COST DATA, by J. D. ROSS. *Journal of Electricity, Power and Gas*, 2 pages, July 18, 1914, p. 55.

Tables of costs compiled from the records of the Seattle Lighting Department are given to show in detail the cost of Seattle's municipal plant as it appeared on the books at the end of 1912.

INVESTMENT AND RETURN

340—Rate of Return.

THE RATE OF RETURN. Editorial, *Electrical Review*, July 25, 1914, p. 153.

No definite method of determining the proper rate of return has yet been developed by public service commissions. It is generally recognized that the ease of securing capital depends upon the risks involved in the utility, the supply of available capital and other opportunities for investment. The aim should be to make the rate of return the same as is earned in other investments where the conditions of risks, etc., are equal. Too often the rate is fixed in an entirely arbitrary way, without a study of the factors which would indicate what the proper rate is.

Some indication as to whether the present earnings of a utility are proper from the standpoint of the regulating body is afforded by the market value of its securities. Even in the case of bonds fully secured by the physical property of the utility we find differences in the market prices, which indicate differences in risk and in the desirability of the investment from the standpoint of the investing public. Since bonds, however, never represent more than a certain fraction of the total investment in a utility, and since their desirability is usually judged by the net receipts, they give little indication of the appropriateness of the rate of return upon the entire property. In the case of the capital stock, however, the situation is quite different and the market value of a corporation's stock is usually some measure of proper earnings.

PUBLIC SERVICE REGULATION

132—Protection from Competition.

PUBLIC SERVICE COMMISSION NEWS—IDAHO. News Item and Editorial, *Electrical World*, ½ page, July 25, 1914, p. 170, and p. 161.

The Public Utilities Commission of Idaho is under attack. The republican and democratic State conventions have inserted planks in their respective platforms

providing for the amendment of the utilities act. It is said by those who are familiar with the intent of the republican plank that it means a declaration for an amendment to the utilities act that will take from the commission power to require companies to apply for certificates of public convenience and necessity before competing in districts where corporations are operating and reasonable rates prevail. The democratic platform says in part: "The law has been interpreted by the republican commission and affirmed by the Supreme Court of the State of Idaho as giving the commission sole and autocratic power to permit existing public utility monopolies to continue their exclusive possession of the market supplied by them; competition is killed; the needed and desired development of Idaho's natural resources is blocked and discouraged. We condemn this substitution of three men commission rule for the public policy of competition and development of natural resources. We pledge the democratic party to such changes in the public utilities law as will secure regulated competition in place of protected monopoly."

The editorial outlines briefly the arguments for protection from competition. The statement is made that to construct new facilities by the side of existing and adequate facilities is not only a waste of private capital, but is an exhibition of public foolishness wherever permitted. Idaho may want to develop its resources, but development at the expense of existing reasonable investment is a sign to the newcomers that their investment may also be jeopardized when another competitor appears.

261—Public Service Bills.

UTILITY LEGISLATION IN COLORADO. *Electric Railway Journal*, 1-8 page, July 18, 1914, p. 142.

Application for a writ of injunction was filed in the District Court at Denver, Col., on July 3 by Attorney General Fred Farrar to restrain the Secretary of State from referring to referendum the bill creating the public utilities commission passed at the last regular session of the legislature, and upon which corporation interests filed a petition for referendum. If the contention of the attorney general is sustained and the bill is ordered off the official ballot for the November election, the law will become effective and the State Railroad Commission will be replaced by the Public Utilities Commission.

240—Commission Procedure.

EXPEDITING COMMISSION PROCEDURE. Editorial, *Electrical Review*, July 18, 1914, p. 106.

If the regulation of public utilities by state commissions is to attain complete success, everything possible must be done to eliminate delays in the findings of such boards upon pending petitions. Reference is made to various cases where the decisions have been long delayed. It is said that full preparation on the part of the company for answering questions arising at hearings, a willingness to be entirely frank regarding every phase of management, and entire avoidance of obstructive tactics with respect to the presentation of data legitimately required, will do a great deal to shorten the number of hearings required in cases in which profound legal and particularly constitutional questions are not involved. In states where a large amount of court work has to be done on behalf of a public utility, it may be desirable to divide the legal work between courts, commission and legislature, retaining different counsel for each of these important fields of service. Conflicting engagements otherwise tend to prolong the hearing to inordinate lengths in companies of large scope and influence. On the part of the municipality or group of consumers usually concerned in commission proceedings, time will always be saved by entrusting the case to an experienced adviser blessed with a broad and liberal mind, and if petty politics can be kept out, all the better. As for the commission itself, it is safe to say that in too many cases too great emphasis is laid upon hearing evidence by the full board in person, and again, the staff is often too small to enable the work of regulation to be handled with prompt-

ness. It is well known by close observers of commission practice that much of the best work of such boards is done in informal conferences outside of public hearings, and in view of the progress which is usually made in this way, it would seem that postponements of public hearings ought not to stand in the way of a reasonable expedition of cases.

MUNICIPALITIES

830—Public Ownership.

DEFECTS OF THE CROSSER REPORT. Editorial, *Electric Railway Journal*, July 11, 1914, p. 57.

It would be difficult to conceive a congressional report in favor of a measure of great and far-reaching consequence that entered less into the merits of the proceeding than that filed by Representative Robert Crosser of Ohio in support of his bill for the government ownership of the street railways of the District of Columbia. Mr. Crosser writes glibly enough about the "great advantages" of government ownership, of better service and lower fares and higher wages. But he gives no basis for his belief that any such thing would happen if the government of the United States were to undertake to run the street railway system of the nation's capital. Nor is there a word as to the machinery by which such an enterprise would be operated. The members of the Public Utility Commission who testified before the House committee admitted freely their inability to cope with the problem of regulating the lines within the district. This certainly makes it reasonable to doubt their ability to operate. But Mr. Crosser offers no solution for this question. As to the great financial problem involved in this enterprise there is not a line in the report except charges that the existing companies are overcapitalized.

830—Public Ownership.

MUNICIPAL OWNERSHIP OF STREET RAILWAYS IN THE DISTRICT OF COLUMBIA. Pamphlet, 72 pages. Published by the Bureau of Public Service Economics.

An abstract of the hearings before the committee on the District of Columbia on the Crosser bill is given and a comprehensive summary of the original voluminous record thus rendered available. An adequate index is included; and page references to the printed "Hearings" are given for every statement in the abstract,

820—State Regulation of Municipal Utilities.

EFFECTS OF STATE REGULATION UPON THE MUNICIPAL OWNERSHIP MOVEMENT, by DELOS S. WILCOX. Reprinted from the *Annals of the American Academy of Political and Social Science*, May, 1914. Pamphlet 14 pages.

The policy of regulation by state commissions, injected into American politics by the political prestige and constructive genius of Hughes and La Follette, and subsequently strengthened by the support of such strong progressive state executives as Woodrow Wilson in New Jersey and Hiram Johnson in California, has displayed more aggressive vitality than almost any other constructive political idea ever launched in state politics. A brief outline is given of the forces which were favorable, and which were antagonistic, to the movement in its beginning; and attention is called to the fact that many of these forces have now taken a reverse position. The direct changes in the powers of cities to undertake municipal ownership, resulting from the enactment of public utility laws, are said to be (1) the indeterminate provision contained in some of the laws, which requires that the municipality purchase the company's property at the commission's valuation; and (2) the provision in many laws bringing municipal undertakings under the control of the state commission practically to the same extent as private undertakings. This restriction and definition of the methods by which municipal

ownership may be attained, and even the supervision of municipal undertakings by the state commissions, may in practice help rather than hinder the municipal movement. But whether they help or hinder, it certainly cannot be claimed that the movement will be unaffected by them. There is an analysis of the indirect effect of state regulation upon the municipal ownership movement, such as the effects made by the assumption of regulatory bodies that the investment is continuous and permanent: and the effects of the control and sanction of public utility construction accounts and capitalization exercised by state commissions. When the city comes to take over a utility or proposes to enter into a contract by which the utility shall be made to pay for itself pending its transfer to public ownership, it is apparent that the rates, which have been scaled down without any provision for the amortization of the capital, may have to be increased again in order to take care of the new factor. If this should prove to be the case, the movement for municipalization would lose much of its political driving power. There is a reason to believe that the average citizen who favors municipal ownership is still moved primarily by the expectation that under it he would secure better service or lower rates, or both, and if it became clear that in order to make municipal ownership successful the rates would have to be raised, it is more than likely that the citizen's enthusiasm for the change would cool off rapidly.

840—Public Operation.

BRITISH MUNICIPAL UNDERTAKINGS. Editorial, *Electrical World*, July 18, 1914, p. 115.

The address delivered by President R. A. Chattock at the convention of the (British) Incorporated Municipal Electrical Association, is discussed. Various peculiar problems which have to be faced when municipalities undertake the operation of their public utilities, are commented upon. It is said that it is striking to note that there is under way at present in England a strong movement toward reducing still further the cost of energy supply by centralized undertakings such as are very common in private hands here. The same movement is in evidence everywhere and only awaits the action of Parliament to be put into effect. The sluggishness of this body and the disinclination of municipalities to surrender any portion of their individual control act to block the scheme. There is much to be said for the English form of Parliamentary government, but if every plan for the wholesale supply of electricity in this country had to be approved by Congress progress would be painfully slow. If local pride in municipal undertakings had also to be reckoned with, one would fear actual retrogression, if such a thing were possible. Altogether it is very evident that the municipal undertakings in England have troubles of their own, even though they may not be quite the same as those that are familiar on this side of the water.

830—Public Ownership.

WHO OWNS THE PENNSYLVANIA RAILROAD? Editorial, *Engineering News*, July 16, 1914, p. 146.

The lists of the stockholders of many of the great railway and industrial corporations show that the stock is widely distributed and is held largely in small holdings by persons scattered all over the United States. Figures of the Pennsylvania R. R. Co. are quoted as an example. The underlying idea in a large part of the agitation for government ownership is that the railways are now owned by a few individuals of enormous wealth, who are rapidly growing richer from the dividends and interest payment, whereas if the railways were taken over by the government, the government itself would hold all the stocks and bonds and would receive all the profits. But as the above discussion shows, the railways of the country are owned not by a few thousand wealthy individuals but by millions of people who work for their living. The government could not and will not, until the forces of anarchy are triumphant, destroy the property belonging to all these people and forcibly take it away from them. If we are to have government ownership of railways, it can only come about by the government buying

the railways from the stock and bondholders and paying for them in promises; or, in other words, government bonds. This would simply mean that the millions of people who now hold railway stocks and bonds would hold government bonds instead, and the government itself would be obliged to pay the interest on these bonds or go bankrupt, whether the railways earned profits enough to pay the interest or not. If anyone believes that under government ownership the railways would be more efficiently and economically and honestly managed than they are now by their present officers under the supervision of State and Federal authorities—if anyone really believes this proposition, he should make a careful study of what the government actually does in spending money on river and harbor improvements.

GENERAL

771—Inspection.

ELECTRICAL INSPECTION. A Discussion at a Joint Meeting of the Electrical Section, W. S. E., and Chicago Section A. I. E. E., March 26, 1914, *Journal of the Western Society of Engineers*, 19 pages, June, 1914.

Causes of defective and dangerous construction and possible means of prevention are discussed, and the necessity for proper inspection to insure the safety of the installation is emphasized.

112—Franchises.

KANSAS CITY RAILWAYS FRANCHISE ORDINANCE. Article and Editorial, 6 pages, *Electric Railway Journal*, July 18, 1914, p. 111, and p. 105.

An abstract of the ordinance recently approved by voters of Kansas City, Mo., is given. Among the features shown are a partnership method of control, a valuation of the physical and intangible property of the company, a 6 per cent rate of return, a plan for division of excess earnings with the city, and a recapture clause.

The editorial states that it may be taken for granted that the ordinance is deficient in some respects from the standpoint of either interest. The real question, however, is, whether or not it was to the interest of both company and public to make a reasonable settlement rather than to continue hostility and retard development of the city. The ordinance gives the city many rights and steps the period of rehabilitation forward from 1925 to 1914, eleven years. Those years will be lived better with the modern service that the city can compel than if they were frittered away in fruitless franchise controversy. The ordinance represents many of the best ideas in settlements, and is a workable contract, promoting, not retarding, progress.

112—Franchises.

THE KANSAS CITY FRANCHISE, by DELOS F. WILCOX. *Electrical World*, 1½ pages, July 18, 1914, p. 127.

Mr. Wilcox outlines his chief reasons for holding that the Kansas City settlement is an improvident contract from the city's standpoint. He asserts that cities ought to assume for the future the ultimate risk of public utility investments in so far as such risk is due to the possibility of existing structures becoming obsolete through the development of the arts and changes in the conditions of the service. In return for making the investment safe and the annual interest payments and the ultimate return of the principal certain, the city ought to get very important advantages. From the standpoint of the cost of capital, these advantages ought to approximate the advantages of municipal ownership. The street railway interests eagerly embrace the doctrine of a safe investment and of a guaranteed return upon it, but the safer the investment and the surer the annual return, the less they are inclined to favor the ultimate withdrawal of their capital through

the process of amortization or otherwise. They are glad to accept the advantages of the proposed program but are loath to pay the price that may be reasonably expected of them. The companies balk at two points. In the first place, the existing investment has to be measured and recognized as a sort of financial base or starting point for the readjusted financial relations of the future. The companies take the position that in making a new deal the city should assume past risks as well as future risks, and include lost investments in one form or another in recognized capital value. On the other hand, if the enterprise has been profitable that fact is not admitted to be a reason for assuming that the money invested in superseded property has been withdrawn from capital account, but rather is put forward as a reason for a further swelling of the recognized investment. Whether they have won or lost under the speculative conditions of the past, they ask the city to pay for it. In the second place, the companies are generally unwilling to accept a rate of return hammered down to the point that the security of the investment will warrant.

COURT DECISION REFERENCES.

224—Rate Regulation.

HOUSTON E. & W. T. R. Co. v. UNITED STATES. Decision of the UNITED STATES SUPREME COURT. June 8, 1914. 34 Sup. Ct. 833.

Rates made by the carriers out of Dallas and other Texas points were much lower than those which they extended from Shreveport, Louisiana, into Texas. This injuriously affected the commerce of Shreveport which competed for the trade of the intervening territory with the cities of Houston and Dallas.

The Interstate Commerce Commission found that the interstate class rates out of Shreveport to named Texas points were unreasonable, and it established maximum class rates for the traffic. These rates, we understand, were substantially the same as the class rates fixed by the Railroad Commission of Texas, and charged by the carriers, for transportation for similar distances in that state. The Interstate Commerce Commission also found that the carriers maintained "higher rates from Shreveport to points in Texas" that were in force "from cities in Texas to such points under substantially similar conditions and circumstances," and that thereby "an unlawful and undue preference and advantage" was given to the Texas cities, and a "discrimination" that was "undue and unlawful" was effected against Shreveport. In order to correct this discrimination, the carriers were directed to desist from charging higher rates for the transportation of any commodity from Shreveport to Dallas and Houston, respectively, and intermediate points, than were contemporaneously charged for the carriage of such commodity from Dallas and Houston toward Shreveport for equal distances, as the Commission found that relation of rates to be reasonable. 23 Inters. Com. Rep. 31, 46-48.

The order was assailed on the grounds:

1. That Congress is impotent to control the intrastate charges of an interstate carrier even to the extent necessary to prevent injurious discrimination against interstate traffic; and (2) that, if it be assumed that Congress has this power, still it has not been exercised, and hence the action of the Commission exceeded the limits of the authority which has been conferred upon it.

The Court holds these contentions to be without merit.

Congress, in the exercise of its paramount power, may prevent the common instrumentalities of interstate and intrastate commercial intercourse from being used in their intrastate operations to the injury of the interstate commerce. This is not to say that Congress possesses the authority to regulate the internal commerce of the state, as such, but that it does possess the power to foster and protect interstate commerce, and to take all measures necessary or appropriate to that end, although intrastate transactions of interstate carriers may thereby be controlled.

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Rate Research

Vol. 5

CHICAGO, AUGUST 5, 1914

No. 19

For statement of facts and opinions contained in papers abstracted herein, the Association does not hold itself responsible

COMMISSION DECISIONS

NEW YORK (1st D.)

617—Breakdown or Auxiliary Service.

C. PERCEVAL, INC. v. THE NEW YORK EDISON COMPANY, Alleging that the Company has Unjustly Refused to Furnish Auxiliary Service. Decision of the NEW YORK PUBLIC SERVICE COMMISSION (1st. D.), Dismissing the Complaint. March 3, 1914.

The Complainant had contracted for service from a private plant in an adjoining building during the hours of 7:30 a. m. to 5:30 p. m., and applied to the New York Edison Company for service at other times. The complainant made three written applications to the Company for supply of electric current under the company's wholesale schedule, general rate schedule and power schedule respectively, crossing out on the printed form in each case, however, the clause providing as follows: "And that no other service be introduced or used in connection with the equipment supplied hereunder, without the previous written consent of the New York Edison Company." The Edison Company refused to give the service except under the conditions expressed in the clause.

. . . . What the complainant attacks in this case, therefore, is the reasonableness and legality of this clause and the power of the Edison Company to require its insertion in any contract, at least in a contract made under the circumstances existing in this case. . . .

This case is in some respects similar to another case recently decided by the Commission (Frankel Brothers v. New York Edison Co., P. S. C. R. [1st Dist., N. Y.] 272). The situation in that case was substantially the same as in this, *except* that there it was the proprietor of the private plant who desired to obtain a supply of electricity from the Edison Company which might be resold to a customer of the private plant, while in this case it is the customer who desires service. . . .

In the former case, the Commission held that it would be unjust to require one supply company to furnish standby service to a competing company and that this applied to a private plant supplying adjoining buildings.

It is our opinion that upon the grounds of reasonableness alone, the complainant is not entitled to the relief he demands. If each consumer of a block plant may demand service which is in the nature of breakdown, supplementary or auxiliary service, the block plant

EDITORIAL NOTE.—All indented matter is direct quotation.

could be shut down nights, Sundays and holidays, or whenever there is little electricity required by its customers, the general supply company being required to take care of those periods as well as to supply all deficiencies caused by breakdown or inadequacy of the block plant at any time and even to take over the entire service at the time of peak loads. Further, it is plain that if the complainant in this case, and other users of electricity similarly situated, are held to be entitled to demand and receive service from a general electrical supply company in addition to service from an adjoining plant, the practical effect of the Commission's decision will be that the individual consumers will apply for service instead of the adjoining supply company. . . .

The statutes of this State recognize the distinction between a private plant used to supply electricity merely to the proprietor or to his tenants, and a plant which also supplies one or more neighboring buildings. The Public Service Commissions Law (subdivision 13 of Section 2) defines an electrical corporation as including:

"Every corporation, company, association, joint stock association, partnership and person owning, operating or managing any electric plant except where electricity is generated or distributed by the producer solely on or through private property for railroad or street railroad purposes or *for its own use or the use of its tenants and not for sale to others.*"

In our opinion, this suggests the point at which the line should be drawn. It is obvious that a public service corporation is obligated to supply under normal conditions every person who demands service and obtains the same kind of service from no other source. It is clear that one public service corporation may not reasonably be required to furnish breakdown service for a competitor furnishing the same kind of service in the same area. Between these two extremes there are many cases involving peculiar conditions, and at some point a line of demarcation must be drawn. Upon one side of it are the cases where the company is not required to supply. Upon the other are cases where the company is required to supply. Obviously, the cases close to the border line upon one side will not differ greatly from those on the other side of the line, but there must be some point of transition, and in our opinion, the line is crossed when a consumer undertakes to supply adjoining properties, selling his current to other than his own tenants, and where a consumer demands the privilege of switching his installation, or any part of it, from one source of supply to another, both of which are located outside of his own premises.

However, whether the statutes require the Edison Company to supply the complainant, is a question of law; and if the complainant has a legal right to such supply, the Commission cannot and would not deprive him of that right. But the Commission does not consider that, if he has no such legal right, he is entitled to a supply of

electricity upon the ground that such service would be a reasonable obligation to impose upon the company.

In conclusion, it should be remembered that the Edison Company in resisting the demand of the complainant has not done anything to prevent it from patronizing a competing supply of electricity if it chooses to do so. The company only insists that if the competing supply is patronized for part of the time, such competitor must assume the entire burden and responsibility of supplying the complainant. . . .

NOTE.—The APPELLATE DIVISION of the NEW YORK SUPREME COURT has overruled this decision and returned the case to the Commission for reconsideration. The findings of the court will be reported when a copy of the case is received.

MISSOURI

300—Investment and Return.

COMPLAINT V. KIRKSVILLE LIGHT, POWER AND ICE COMPANY, Alleging that Rates for Electric Service Are Excessive and Discriminatory. Decision of the MISSOURI PUBLIC SERVICE COMMISSION, Fixing Rates. June 23, 1914.

The Commission made an investigation to determine original cost, reproduction cost new, and present value of the property. Revenues and expenses were investigated and the Commission held that a reduction in rates was justified. Certain inequalities in the company's rates are to be eliminated. For example, the company has been furnishing street lighting free to the city of Kirksville.

616.1—Street Lighting.

The result of furnishing street lighting free must be either to make the cost of such service fall upon the consumers who thus pay for it in the way of unreasonably high rates, or else it must come from the profits of the company and thus from the stockholders. It is difficult to imagine that defendant would voluntarily forego profits in order to furnish free service to the city, so furnishing this free service must mean that its cost is distributed among its consumers rather than among the tax payers of the city, as would be the case if the city paid a reasonable price for the street lighting, as is customary. The minimum rate which is advisable for a utility to charge is fixed by the cost of that particular service to the utility. In other words, no service should be furnished below cost, otherwise unreasonably high rates will have to be charged to other consumers. Low rates for long-hour use of electricity, or for day-time use of electricity from a plant which is essentially a lighting plant can only be justified on the basis that the establishment of such rates reduces the cost to all consumers and that there is no discrimination among consumers or different classes of consumers, that is, an additional low rate

should show a margin of profit above the cost of rendering the additional service and this marginal profit should be the same for all consumers.

500—Rate Practice.

The Commission states that it has under consideration the adoption of certain rules covering such matters as discounts, minimum charge, security deposits and discontinuation of service. The Commission considered the rules submitted by the Company and passed upon them pending the final adoption of uniform rules for all electrical corporations.

531—Prompt Payment Discount.

As it is of importance that each consumer pay his just proportion of the reasonable income of defendant and to facilitate prompt collection, the Commission sees no objection to a discount for prompt payment of say ten per cent on all bills paid on or before the tenth of the month, as has been included in the rate schedule.

540—Minimum Charge.

Defendant has asked us to be allowed to charge a minimum bill of \$1.00 per month. The utility furnishes and maintains the customer's service connections and meter and reads the meter monthly, and the minimum bill insures the utility's receiving an amount sufficient to cover this cost as well as the small amount of electricity used; i. e., the minimum bill is based on the cost of being ready to serve the individual consumer. Meter rental such as has been heretofore charged by defendant (25c. per meter per month) is hereinbefore found to be unlawful, as the utility is obligated to furnish meters and the costs as well as return on this investment are already included in the bill of consumers using any considerable amount of electricity. In the minimum bill should be included the charge for the minimum use of electricity, approximately three kilowatt hours. . . The defendant should be allowed to charge a minimum bill of 75 cents per customer per month, but no meter rental. Temporarily, customers who own their meters should be paid a monthly rental of 25 cents a month by defendant until the meters are purchased by defendant.

580—Terms and Condition.

The company asks for authority to establish a rule requiring a security deposit not to exceed \$10.00 as a maximum.

The Commission is of the opinion that defendant may require personal security to the amount of twice the average monthly bill, and in cases where satisfactory security cannot be furnished a cash deposit in like amount may be required, on which, however, the defendant should pay the depositor interest at the rate of six per cent per annum, as was decided in Case No. 39, *Cole v. Ft. Scott & Nevada Light, Heat and Power Company* (1 Mo. P. S. C. 209).

Defendant asks to be allowed to disconnect and discontinue service to any customer failing to pay his monthly bill thirty days after it

becomes due. The utility should not be required to furnish service to customers who do not pay, and this meets with the Commission's approval, provided three days' notice be given of intention to disconnect and the customer allowed that final opportunity to pay the bill before service is discontinued.

DISTRICT OF COLUMBIA

129.1—Discrimination.

In the Matter of Flat Rate Business Service by the CHESAPEAKE & POTOMAC TELEPHONE COMPANY. Decision of the PUBLIC UTILITIES COMMISSION OF THE DISTRICT OF COLUMBIA, Holding That This Business is Discriminatory and Therefore Unlawful. May 4, 1914.

The Company desired to cancel an existing contract by the terms of which the subscriber receives an unlimited telephone service for a stipulated sum. The contract runs for a period of one year and contains a provision that the contract shall be terminated only after ten days notice by either party, and that "every such contract shall be deemed as continuing on the same terms, after expiration of such term, unless it is terminated by such notice."

This class of service, known as flat rate business service, was filed with the Public Utilities Commission by the said telephone company as an obsolete rate. The term of the contract has expired, and the question before the Commission is: Does the continuance in force of the services provided by this contract and other contracts of like character constitute a discriminatory rate in violation of the Public Utilities Law? The Commission adopts the opinion of its General Counsel that the flat rate business service above referred to is discriminatory in the meaning of the law and that the continuance in force of this and similar contracts discriminates against new subscribers who are refused similar service by the telephone company and perpetuates the very inequality of service which the Public Utilities Law was enacted to prevent.

WISCONSIN

830—Public Ownership.

Application of the BROWNTOWN MUNICIPAL LIGHT PLANT for Authority to Increase Rates. Decision of the RAILROAD COMMISSION OF WISCONSIN, Increasing the Rates. June 8, 1914.

A petition for authority to change rates was filed by the lighting board of the village of Browntown stating that the municipal lighting plant is not self-supporting. Another petition signed by a number of the citizens of the village asks that the operation of the plant be discontinued or that the business be placed on a self-sustaining basis.

The Commission finds that the rates would have to be doubled if the

deficit from operation were to be wiped out by a modification of the schedule of rates.

That the deficit could be removed even in this drastic manner is extremely doubtful for, it seems, an increase so great would be sure to drive away much of the present business. This raises the question of whether the rates must be such that cost of service shall rest entirely upon the consumers. Clearly, this depends upon circumstances for the rates must be fair to the consumers as well as to the owners of the utility, and the actual cost is not always the entire measure of fairness.

The applicant has constructed a municipal electric plant for the mutual benefit, it is to be supposed, of its citizens. Their obligation, however, does not end with the building of the plant for the plant needs patronage in order to prosper; and the owners, in this instance, are dependent upon themselves as patrons of the plant. This utility operates in a community so small that the undivided support of all its citizens is needed to make the undertaking successful. That this is true must have been known from the inception of the utility undertaking for it is evident that if every building in the village were electrically lighted the total electric business would still be small.

The Commission finds that only 17 per cent of the residences take electric service.

Under these conditions, should all the loss from operation be loaded upon those who now use service? To do so, appears to us unreasonable.

540—Minimum Charge.

The applicants proposed to better the financial condition by increasing the minimum charge. The Commission holds that the minimum charge should be fixed to cover certain expenses which it is intended to meet rather than to be used as a means of increasing revenue. The following holding is quoted from the McGowan Water, Light & Power Company case as applicable in this instance.

“As far as the total revenues of the utility are concerned, it is clear that a minimum charge of \$1.00 per month will not produce an excessive amount of revenue. A minimum charge very much higher than \$1.00 a month would in fact fail to make up the deficit. It appears to be impracticable to attempt to any considerable extent to increase the total revenues of the utility by means of a minimum charge. Consequently the question of authorization of a minimum charge of \$1.00 should be decided with reference to the reasonableness of that particular charge rather than with reference to the total revenues of the utility, although this matter is also an item to be considered.”

The Commission found that a minimum charge of 75 cents was reasonable and authorized an increase in the general lighting and street lighting rates. It appears that if additional business is secured, the increase authorized will be sufficient to practically eliminate the deficit.

WISCONSIN

300—Investment and Return.

CITY OF WATERTOWN V. WATERTOWN GAS & ELECTRIC COMPANY, Alleging Excessive Rates. Decision of the WISCONSIN RAILROAD COMMISSION, Fixing Rates for Street Lighting Service. June 25, 1914.

The original complaint covered the matter of rates for electric light and power and for gas light and fuel. The city also filed a petition asking that it be granted a certificate of convenience and necessity to do its own street lighting. The proceedings were limited to determining a proper rate for the company's street lighting service.

The respondent company receives part of the energy from the Milwaukee Light, Heat and Traction Company, and question arose as to the reasonableness of the terms under which this current is purchased.

The question of what the Milwaukee Light, Heat and Traction Company is entitled to charge the Watertown Gas and Electric Company for current for resale leads into phases of the subject which do not appear to be very material to the issue in the case. To furnish an answer to this question would require knowledge not only of how much profit should be allowed upon the current resold to the public, but also how the profit should be divided between the two companies. This would be an important matter if we were to consider the relative interests of the stockholders of the two companies, but, in so far as the relation of the public and the respondent is concerned, this question covers considerably more ground than is necessary.

In arriving at a fair allowance for power, we have taken into consideration the cost of securing the power in several different ways, which may be enumerated as follows: (1) producing current at the Watertown hydraulic plant with steam reserve equipment at the same place; (2) producing current entirely by means of a steam plant at Watertown; (3) receiving current from the Kilbourn hydraulic plant and using a steam reserve located at Watertown; and (4) producing current at the Watertown hydraulic plant, receiving current from the Kilbourn plant and using the steam plant at Milwaukee as a reserve. Of all these methods, the last, which is the scheme now employed, appears to be the most economical, and this economy seems to be due, in large measure, to the use of the Milwaukee steam plant as a reserve for emergency. That the public should at least share in such economy seems quite clear, for it is on account of public interest and by virtue of public authority that monopoly conditions are maintained under regulation in public utility business. But, on the other hand, it seems to be required also that those who engage in the business should receive something for effecting unusual saving in operation. Otherwise regulation stifles development of efficient methods and processes which competition naturally promotes. With these facts in view, we conclude

that under present conditions about \$15,000 should be allowed for power, in addition to fixed charges on the Watertown generating plant. This would give a very substantial saving to the public and also a fair profit to the utility.

Attention is called to the fact that the figure shown here as an allowance for the power furnished by the respondent rests upon the value found by the Commission for the respondent's present plant as well as upon the cost of producing the power by other means. If other facts remain the same, the proposition appears quite evident that the allowance for power would have to be reduced accordingly if the investment value determined by the Commission were increased, or vice versa.

COURT DECISIONS

CALIFORNIA

224—Rate Regulation.

PINNEY & BOYLE CO. v. LOS ANGELES GAS & ELECTRIC CORPORATION. Suit to Declare Void an Ordinance Fixing Power Rates. Decision of the SUPREME COURT OF CALIFORNIA, Upholding the Ordinance. June 10, 1914. 141 Pacific 620.

The rates which the Pinney and Boyle Company paid for electric power were increased by a rate-fixing ordinance passed by the city of Los Angeles. The power company thereupon refused to furnish service longer at the original contract rate. The consumer consequently brought this suit denying the city's power to fix the rates in question.

100—Public Service.

Appellant held that

furnishing electricity for power to be used as plaintiff was using it in its private business is not the performance of a public service which can be regulated by the municipality but is a private use governed solely by convention and agreement of the parties. . . .

Its position is, in effect, that it is the use which the consumer makes of the commodity furnished which constitutes the test as to whether or not the regulatory powers of boards and commissions in dealing with public utilities may be invoked. Such, however, is not the test. Generally speaking, the public utility can and does have no interest in or control over the commodity which it furnishes when it has passed into possession of the consumer. It is the duty which the purveyor or the producer has undertaken to perform on behalf of and so owes to the public generally, or to any defined portion of it, as the purveyor of a commodity or as an agency in the performance of a service, which stamps the purveyor or the agency as being a public service utility. Of course, it is true that if A has erected a power plant and has agreed to sell a portion of his electricity to his neighbor B, he is not devoting his property to a public service. But if A shall have erected his power plant and shall have offered to sell his power to the whole or a

defined portion of the community, he is to that extent, devoting his property to a public use and has brought it within the regulatory police powers of the State. This we conceive to be not only fundamentally true, but is the declared view of this court in *Clark v. City of Los Angeles*, 160 Cal. 30, 116 Pac. 722.

No question can exist as to the power of the city of Los Angeles in the matter of the regulation of such public service corporations. It is expressly conferred by Article 1, Section 2, subd. 30, of the charter of the city of Los Angeles. (Amend. March 25, 1911).

224—Rate Regulation.

Appellant asserts that the only reasonable use of the police power in the matter of rate-fixing is to establish the maximum charge which the public utility may make, leaving it open to the public utility by agreement to fix a less charge for an individual consumer. The untenableness of this position, however, must become apparent when a moment's consideration is given to the fact that one of the primary and most important objects to be attained by rate regulation is the prevention of discrimination. It must be quite clear that to hold that the rate-fixing power goes no farther than to name an amount beyond which a charge may not be made leaves the utmost room for abuse by way of favoritism and discrimination within that limit. It is in practical effect, a denial of the existence of the rate-fixing power itself. Moreover, while the public utility is bound to render the service or furnish the commodity, an individual member of the public is not compelled to accept the service or use the commodity. If he does so, it is conclusively held that his act is an acceptance of the rate fixed and that he may not thereafter contest the reasonableness of the rate. *Brooklyn Union Gas Co. v. City of New York*, 188 N. Y. 334, 81 N. E. 141, 15 L. R. A. (N. S.) 763, 117 Am. St. Rep. 868; *Griffith v. Vicksburg Waterworks Co.*, 88 Miss. 371, 40 South 1011, 8 Ann. Cas. 1130. This salutary rule applies with peculiar force to the condition existing in Los Angeles, where the charter itself provides that any person interested in the rate-fixing may file his objections and be given a hearing thereon before final action. Charter of Los Angeles, Section 155, Subd. 2; Amend. of 1911.

244—Rehearings and Appeal.

The appellant held further that

the provision of the ordinance making the maximum and minimum rate the same and at the same time denying consumers the right which it gives to the producer to apply for a change or reduction of rate is unconstitutional and void.

[The] period of stability and repose fixed by this ordinance is one year. The consumer had an opportunity to be heard before the rate was finally fixed. The provision allowing the public utilities to petition for a reduction of the rate is one as clearly designed for the benefit of the consumer as of the company itself. No want of equal protection of the law is here shown. Quite different would be the

case if the company were allowed to petition for an increase of rate during the life of the ordinance without an opportunity to the consumer to be heard upon the question of its maintenance, or reduction. It appears clear, therefore, that the contention that the appellant is denied the equal protection of the law under the charter and ordinance here under consideration is unfounded.

REFERENCES

RATES

614—Heating and Cooking.

COOKING LOAD IN LONDON. *Electrical Review*, $\frac{1}{3}$ page, August 1, 1914, p. 205.

Figures are given to show the progress made by the Marylebone and West Ham municipal electricity departments in increasing the use of electricity for heating, cooking and other domestic uses.

450—Value of the Service.

ANNOUNCEMENT EXTRAORDINARY. Article and Editorial, *The Isolated Plant*, $1\frac{1}{2}$ pages, August, 1914, p. 10 and p. 7.

The Rate Research Committee Report for 1914 is discussed. Basing rates for electric current on the value of the service to the user is held not to be different from charging an automobile user who is not dependent on street-car service a one-cent fare, and charging a working-man who is dependent upon the service a five-cent fare. It is said that it is true that a recommendation is made that no service shall be supplied below cost, but the principle boldly declared—blazoned in fact and publicly announced—is that rates shall be based on possible competition by a private user. It is alleged that this theory has been really the basis of the rates of the public utility companies all along, but heretofore the representatives of these companies have sedulously endeavored to conceal the fact under guise of such statements as "the small consumers cost far more to supply than the large ones," or "on account of impossibility of storage of electricity short-hour users should pay more than long-hour users." The editorial states that "it would appear that the piratical brig has come out from behind the Island of Subterfuge and run up her true colors," and is accompanied by a cartoon representing the Rate Research Committee as hoisting a pirate's flag.

600—Rate Differentials.

DISCUSSION ON EQUITABLE RATES. Held before the Annual Meeting of the Wisconsin Gas Association. *The Gas Age*, 1 page, August 1, 1914, p. 125.

In discussing the amount of charges to be borne by the small consumer, Commissioner Halford Erickson spoke as follows: "In the thousands of rates which I have made and which the commission has made, there is not yet one case where we have had the courage to make the short-hour user pay all he should. The result therefore is that we make a lower rate for the short-hour user than he should have and a higher one for the long-hour user than he should bear; but there have been so many conditions—outside conditions—surrounding the situation, that it has not been deemed advisable to put each consumer as yet upon quite the proper basis. The time when they can be put on the proper basis probably never will come until the plants themselves will take hold of the rate problem and explain it thoroughly to their own customers. As it is now, there are very few customers anywhere who seem to really understand the problem, who really know that each

of them should bear their respective proportion of the demand expense and of the customers expense and of the output expense. It is expenses divided on this basis that you have to cover, of which each customer should bear his share. Not thinking it advisable as yet to charge the short-hour user his full share of all the costs, we aim to make rates under which he is made to bear his share of the operating expenses, including depreciation, and at least something for interest and profits. The bulk of the fixed charges, therefore, have to be borne by the long-hour users. Some time in the future we can probably get down to the proper basis, but when we do, it will be through better education."

410—Cost of Service.

MAXIMUM LENGTH OF PROFITABLE RIDE IN BOSTON. Article and Editorial, *Electric Railway Journal*, 1 page, August 1, 1914, p. 206, and p. 193.

In connection with a report upon transportation conditions within the Boston metropolitan district submitted to the last Legislature, the Massachusetts Public Service and Boston Transit Commissions, sitting as a joint board, filed an appendix discussing the maximum length of profitable ride on the Boston Elevated Railway system. The board recognizes that the determination of this question does not admit a general answer, being dependent upon certain assumptions, but it works out the case for Boston on the supposition that the average passenger rides two-thirds of the length of each half round trip. The board arrives at the conclusion that a 5-cent fare will permit a 4-mile ride for each passenger and just cover operating expenses, interest and depreciation. The appendix treating the question is given in abstract form.

INVESTMENT AND RETURN

395—Proceedings of Technical Associations.

OHIO ELECTRIC LIGHT ASSOCIATION, Twentieth Annual Convention, Cedar Point, July 21-24. *Electrical Review*, 7 pages, August 1, 1914, p. 229; *Electrical World*, 3 pages, August 1, 1914, p. 218.

An account is given of the proceedings of the convention including abstracts and discussions of the following reports and papers: Report of the Committee on Insurance, Report of Committee on Illumination; Meter Committee Report; Report of the Electrical Transmission Committee; Report of the Committee on Accounting; "Power Service," by J. H. Mitchell; "Municipal Ownership," by H. J. Gonden (see 5 RATE RESEARCH 303); Report of the Committee on Electric Vehicles; Report of the Committee on New Business; "Indeterminate Franchises," by Halford Erickson (see 5 RATE RESEARCH 302).

PUBLIC SERVICE REGULATION

132—Protection from Competition.

COMPETITION NOT WANTED AT HELENA, MONTANA. *Public Service*, $\frac{1}{4}$ page, August, 1914, p. 58.

That the public is awakening to the injury of competitive public utilities was demonstrated at a special election called recently at Helena, Mont., to vote on a proposition to give a franchise to a competitive electric light plant. By a decisive vote, Helena taxpayers determined that they did not want a competing electric light plant in this city. The franchise which was asked for by the Standard Engineering Corporation failed to carry by a vote of 530 to 336. The officials of the Standard Engineering Corporation, and those who opposed them started out with many automobiles rounding up taxpayers to carry them to the polling booths.

200—Public Service Regulation.

REGULATION. Editorial, *Journal of Electricity, Power and Gas*, July 25, 1914, p. 86.

The results of regulation of public utility rates by the various methods which have been tried—competition, direct regulation by legislative bodies, public ownership, and commission regulation—are outlined. It is held that the last is the most satisfactory of these methods. It is stated that efficient public service commissions have been established in nearly every state of the Union, the commissioners are men of high character and great determination (though lacking in knowledge of engineering, the basis of every public service), the companies are cleaning house, even to the extent that the sins of the directors are being visited upon the stockholders unto the third and fourth generation, and the public should do their part in fairly and patiently waiting the outcome of this brave attempt to establish harmony.

112.1—Indeterminate Permits.

THE INDETERMINATE FRANCHISE OR PERMIT, by HALFORD ERICKSON. Portion of an Address before the Ohio Electric Light Association, July 24, 1914. *Electrical Review*, 3 pages, August 1, 1914, p. 224.

The paper treats of some of the more essential features of the indeterminate franchise as it obtains in Wisconsin. Attention is called to the fact that the Wisconsin indeterminate permit may be said to be the outcome of the efforts that had been made from time to time to find some franchise or permit for public utilities to operate under that would go further in protecting public interest and in stimulating private initiative than any of the existing franchises. There is an analysis of the history of the Wisconsin indeterminate law; of the arguments for and against the indeterminate form of franchise; and of the factors in the law which tend to protect the public and to promote its convenience and welfare. Certain objections which have of late been raised against both the indeterminate permit, and public convenience and necessity and other provisions in the Wisconsin public-utility law, ranging from the monopoly features of these laws to their effect upon local regulation and municipal ownership, are considered. It is held that the law accomplishes the prevention of economic waste, and security of investment, and at the same time preserves to the public adequacy of service and reasonableness of rates.

The remaining half of this address is to be given in the next issue of the *Electrical Review*.

MUNICIPALITIES

840—Public Operation.

INEFFICIENCY AND EXTRAVAGANCE IN MUNICIPAL OPERATION. *Electric Railway Journal*, 1½ pages, August 1, 1914, p. 210.

Extracts from a lecture delivered by Logan G. McPherson at Johns Hopkins University, are quoted. The statement is made that a public regulatory body, especially an appointed commission of the type now exemplified by the Interstate Commerce Commission and by the railroad and public-service commissions of the many States, is far less responsive to political influence than is a legislative body whose members are elected for short terms and who persistently seek reelection. Such a body may be an efficient critic and censor of the conduct of a business organization, although its own organization be defective and poorly administered. With proper authority it can bring pressure to bear upon those

actually charged with the administration of business organizations that will cause them to remedy abuses such as a political organization would have great difficulty in remedying within its own ranks. It is pointed out that under government ownership it is almost inevitable that the tremendous voting power of the railway employees would cause their votes to be sought by politicians with various promises of increases in pay and easier working conditions; that the personnel in the railways would be practically the same, but responsibility for their performance would rest ultimately with government officials elected by the people, instead of with officers owing their positions to their efficiency and retaining their positions only so long as their efficiency continues.

840—Public Operation.

ROBBING PETER, by H. J. GONDEN. Address Delivered before the 1914 Convention of the OHIO ELECTRIC LIGHT ASSOCIATION at Cedar Point, July 23, 1914. *Public Service*, 2½ pages, August, 1914, p. 37.

The weaknesses of public operation are pointed out. It is said that investors in a municipal plant are not required to depend upon efficiency in management for the security of their principal and interest—they may depend solely upon the taxing powers of the municipality. Investors in so-called privately owned utilities have no taxing powers of a municipality to secure their principal and interest, and they must necessarily depend upon efficiency and economy in management. Nearly all of them are anxious to show that the departments under their control are economically successful, and under such circumstances a practice of misrepresentation and deceit in official reports has become general. Very few official reports show proper charges for interest, sinking fund and damages, and fewer still present the items of lost taxes, administration salaries, office rent, legal services, etc. An unprinted report of Dabney H. Maury on the Chicago Water Works System, pointing out the inefficiency and extravagance of its management, is discussed. Figures are given to show that many of the municipal plants in Ohio are failures. It is asserted that the political demagogues who cry loudest "let the people rule," are the very ones who want to rule the people; who want to regulate, by legislative theories, every business. The most necessary work of the present is to inform the people of the actual economic conditions existing so that they will not be so easily misled by demagogic politicians and sensation mongering newspapers into such wasteful and extravagant activities as the political control and management of utility properties has proved to be.

800—Municipalities.

MAYOR BLANKENBURG APPOINTS UTILITY EXPERTS. *Electrical World*, August 1, 1914, p. 216 and p. 213; *Electric Railway Journal*, ½ page, August 1, 1914, p. 226.

With the approval of his co-workers, including the Mayors of New York, Chicago, Cleveland and other cities, Mayor Blankenburg of Philadelphia on July 23 appointed eight men of nation-wide prominence as members of the Board of Trustees of the National Bureau of Public Utilities Research. This body was suggested by Mayor Blankenburg to the heads of other cities in this country as a means for assisting in the efforts of cities to obtain lower rates from lighting, transportation and other public utilities. The men selected and their qualifications are given.

The editorial in the *Electrical World* states that, able as the membership of the board is, it is not experienced in the problems of public utilities. It cannot undertake successfully a work of research of the properties until it has an acquaintance with them. It will need competent assistants. The appointment of Mr. Brandeis does not give assurance that the movement will be void of spectacular political features. Only he can say whether he will make use of the methods that effectively advertised his work against the railroads. It would be unjust to condemn the movement in advance of its real inauguration and before the lines of its activ-

ities can be determined. The bureau is designed to represent only the cities. There is a distinct difference between representation of the people of the cities and representation of the mayors of the cities. In the one case the bureau will protect the rights of consumers, investors and employees; in the other there is a very serious danger that it will be used to promote the political fortunes of officeholders.

840—Public Operation.

CLEVELAND'S NEW MUNICIPAL ELECTRIC PLANT: SELLING ELECTRICITY AT A THREE-CENT MAXIMUM RATE. *Engineering News*, 3 $\frac{3}{4}$ pages, July 30, 1914, p. 258.

The possibilities of the success of Cleveland's experiment in selling electric current at a maximum rate of 3 cents per kilowatt-hour is discussed. It is said that it may seem on the face of the figures that the low rates of 1 cent to 2 cents per kilowatt-hour for current to large users would result in a loss; but the cost to be figured against such consumers is chiefly the station-operating cost, since these customers use current at a time when the station and distribution system would otherwise be idle. The cost of distribution to such consumers also is generally very small. Of course, only the test of final experience will determine what will be the average cost for the current sold, and, of course, this average price must be in excess of the 1.96 cents found to be the average cost of current delivered to make the new municipal plant a financial success.

830—Public Ownership.

CITY OWNERSHIP FAILURES. *State Capitol Record, Olympia, Washington*, $\frac{1}{4}$ page, July 18, 1914, p. 7.

According to this article, Seattle's Port District has proven a lamentable failure. Hundreds of thousands of dollars of taxpayers' money has been expended to produce no benefit. The Seattle Municipal Railway seems doomed to a like fate and yet political agitators are urging further municipal ownership.

The privilege of owning and operating a municipal street car system will cost the taxpayers of Seattle \$36,397.25 next year, according to an estimate furnished the finance committee of the city council by Superintendent of Public Utilities, A. L. Valentine. This estimate is filed in order that the tax budget committee may provide for any deficiency by direct taxation. However, it is not expected that the losses of the street car system will figure in the tax levy next year, but that the recently adopted plan of borrowing from other funds will be followed as long as there are any such funds available, rather than to make a levy for the purpose of operating street cars. But borrowing will of necessity be only temporary and finally the tax levy will be required to carry the load accumulated by delays in making up the deficits annually. Valentine's figures are based on the operation of the city system for the last two months, and show that in his opinion the operation of the line will cost for next year \$72,397.25. The sum of \$39,733.23 represents salaries alone; \$13,500 is for interest on the bonds from which Division A was constructed, \$14,850 for electrical power and \$1,255 for the vacations of employees. The total revenues of the system are estimated at \$36,000.

830—Public Ownership.

FLOODWOOD POWER TO BE SUPPLIED AT LOW RATES TO ATHENS. *Electrical Review*, $\frac{1}{3}$ page, August 1, 1914, p. 214.

Particulars are given in regard to an arrangement made between the Central Power Company, which is building a large electric power plant at the coal mines at Floodwood, Ohio, and the City of Athens, Ohio. The city will discontinue the use of its municipal plant and purchase current, since the rates offered by the company are lower than those offered by the municipal plant, and the plant itself was inadequate for the city's needs.

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Rate Research

Vol. 5

CHICAGO, AUGUST 12, 1914

No. 20

For statement of facts and opinions contained in papers abstracted herein, the Association does not hold itself responsible

COMMISSION DECISIONS

MISSOURI

300—Investment and Return.

Complaint v. SPRINGFIELD GAS AND ELECTRIC COMPANY, Application of the Company for Rehearing of Order Fixing Rates. Decision of the MISSOURI PUBLIC SERVICE COMMISSION, Dismissing the Application. July 30, 1914.

The respondent company applied for a rehearing of the order of the Commission fixing rates (see 5 RATE RESEARCH 211).

The Commission denied the motion for a rehearing without making any further statement on the case. Commissioner Wm. F. Woerner, however, issued a dissenting opinion as follows:

On reconsideration of this case I entertain grave doubt whether, all things considered, we have allowed the defendant electric company a sufficient valuation and an adequate return, and I dissent from the order overruling the motion for a rehearing.

INTERSTATE COMMERCE COMMISSION

300—Investment and Return.

THE FIVE PER CENT CASE, Investigation by the INTERSTATE COMMERCE COMMISSION *in re* Rate Increases in Official Classification Territory. Decided July 29, 1914.

Before taking up the matters to be considered in railroad rate making the Commission discusses the "relations of the carriers and the public" bringing out a number of points which are interesting in connection with the regulation of public service companies in general.

100—Public Service.

As long ago as the seventeenth century Lord Chief Justice Hale announced the principle that when one devotes his property, as for example, a ferry, to the common use of all the king's subjects passing that way and upon a common charge for the service, it becomes a thing of public interest and therefore ought to be subject to public regulation. *De Jure Maris*, 1 Harg. Law Tracts 6. This rule of the common law underlies practically all our constitutional and legislative provisions respecting common carriers; and it is now firmly

settled, both by the courts and through legislation that railroads, although constructed with private capital, are public highways subject to public control. In constructing and maintaining such a highway under public sanction the railroad company really performs a function of the state. *Olcott v. Supervisors*, 16 Wall., 678, 694; *L. & N. R. R. Co. v. Kentucky*, 161 U. S., 677, 696; *L. S. & M. S. Ry. Co. v. Ohio*, 173 U. S., 285, 302. . . .

300—Investment and Return.

The decision points out that governmental agencies have in many instances donated rights of way, and have otherwise aided railway companies by contributions of funds, by issuing bonds, or by guaranteeing the bonds of such companies.

Nevertheless the great burden of creating these avenues of communication and transportation has been borne by private investors; and not infrequently they have ventured their capital in such enterprises by extending through undeveloped territories lines that at the time offered little prospect of substantial returns for many years to come. . . .

The common carriers are responsible to the public for furnishing safe and adequate service at reasonable rates.

On the other hand, we can not doubt that the policy of inviting and authorizing the performance of this public function by privately owned companies involves obligations on the part of the public to the owners of these properties. Those who invest their funds in railroad shares are, of course, charged with the responsibility of securing for their properties honest and capable management. Investors in railroad securities, like investors in other securities, must bear the consequences of dishonesty or inefficiency on the part of those selected to manage the properties. No one could reasonably contend that the public should pay higher transportation rates because once prosperous properties—like the New Haven, the Chicago & Eastern Illinois, the Alton, the Frisco, or the Cincinnati, Hamilton & Dayton—may now be in need of additional funds as a consequence of mismanagement. Investors in railroad securities must also take the risk of those errors of judgment which not infrequently attend even the careful management of enterprises conducted for profit. But they should likewise be permitted to enjoy fully the profits which naturally flow, under a reasonable scale of rates, from the exercise of good judgment, integrity and efficiency in the management of such properties. While the right to demand a higher rate may be denied when the existing charge is reasonable, even though the particular carrier may be in need of additional earnings, so a carrier may be entitled to a higher rate for a particular service because the existing rate is unreasonably low, although the carrier may not be in need of additional revenues. . . . (*Railroad Commissioners of Iowa v. I. C. R. R. Co.*, 20 I. C. C., 181, 186).

340—Rate of Return.

Many railroad investments in this country are exceedingly profitable to their owners. In common justice the investors in such properties are entitled to share in the general prosperity and to enjoy the just rewards of their foresight and wisdom so long as the rates exacted are reasonable. It is not only consistent with a national policy that invites the private ownership of railroads that there should be a liberal return on a particular railroad investment, when the property has been wisely planned and honestly constructed and is efficiently managed; but the full development of that policy, as well as justice, requires that such a return should be made. The public interest demands not only the adequate maintenance of existing railroads, but a constant increase of our transportation facilities to keep pace with the growth and requirements of our commerce. If, however, the development is to be accomplished with private capital, in conformity with our traditions, nothing can be more certain than that the facilities will not be provided except under such a system of regulation as will reasonably permit a fair return on the money invested.

The public owes to the private owners of these properties, when well located and managed, the full opportunity to earn a fair return on the investment; and the carriers owe to the public an efficient service at reasonable rates. This fundamental doctrine has been recognized by the Commission in the performance of its duties. The proceeding before us may therefore be described as, in some sense, a controversy between the consuming public which pays the rates, and the investor who furnishes the facilities for moving the freight; and our duty is to ascertain from the record before us what are their respective rights. . . .

NEW JERSEY**788—Service Rules.**

COMPLAINT OF MAX TAUB V. PUBLIC SERVICE ELECTRIC COMPANY, Based on Refusal to Furnish Service. Decision of the NEW JERSEY BOARD OF PUBLIC UTILITY COMMISSIONERS, Dismissing the Complaint. May 19, 1914.

The Company refused service because of the failure of the complainant to provide for the grounding of secondaries of transformers inside his premises as required by the Company's rule. The decision reviews expert testimony in regard to the grounding of secondaries of transformers, the object of grounding, objections to grounding, methods of grounding, and the preferred method.

The Board states that after extended investigation the Board entered an order effective January 1, 1914, putting into operation "Rules, Regulations and Recommendations for Electrical Supply Utilities and for all Utilities Owning or Using Poles and Wires."

This order, which is still in effect, provides among other things that—
“XIV. The rules contained in the 1913 edition of the National Electric Code regarding grounding of secondaries are hereby adopted for all new connection. . . .”

The order is general. The rule laid down by it is applicable to all companies under the jurisdiction of the Board.

The rules contained in the 1913 edition of the National Electric Code regarding grounding of secondaries, and adopted by the Board are found in Section 15. In so far as they are pertinent they are set forth in the decision and the Board finds that the Company's rule is in accord with the order of the Board.

It is urged by the complainant that the cost of the inside ground wire should be borne by the Company, and not by the consumer. In considering the complaints of Fernando W. Meyer and Joseph McBride, the Board concluded that the house wiring included the running of the inside ground wire, and the cost thereof should consequently be borne by the consumer. The present record discloses no reason for changing this conclusion.

The Board also considers the question as to the necessity of securing the consent of the municipality where the grounding is made by inside connection to water pipes. The opinion is expressed that:

since the connections proposed to be made are to be made to service pipes which are the property of the owner of the premises, and not of the City, the City has no authority to grant permission to make such connections; and that, if the City has such authority, the authority is vested in the Mayor and Council of the City, and not in the Board of Water Commissioners. . . .

In the judgment of the Board the making of the connection does not require that the consent of the municipality be obtained.

The service pipe is part of the house plumbing. The municipality is in nowise responsible for it.

If the connection made to it cannot detrimentally affect the system of the municipality it is difficult to perceive how it concerns the municipality.

361.5—Electrolysis.

The possible detrimental effects of making such connections upon the City's system through the action of electrolysis was considered. Expert opinion is quoted as follows:

“Alternating current, of a frequency as is used for electric light and power for buildings in Hoboken, * * * is current which reverses in direction one hundred and twenty times every second. When such a current flows between an iron pipe and surrounding soil, there is only a negligible effect from electrolysis.” . . .

“* * * the practice has been followed in so many places without any case of injury to the water pipes being detected that objections of this sort can easily be shown to be unreasonable.”

The National Electrical Code (ed. 1913), too, contains this note (p. 29):

"Companies and Departments in charge of water works are urged to allow the attaching of ground wires to their piping system in full confidence that the integrity of such piping system will not in any way be affected, whatever may be the normal voltage."

After full consideration of the case, the Board dismissed the complaint.

COURT DECISIONS

NEW YORK

617—Breakdown or Auxiliary Service.

PEOPLE EX REL. PERCEVAL V. PUBLIC SERVICE COMMISSION FOR FIRST DISTRICT, ET. AL. Certiorari to Review a Decision of the Commission That the New York Edison Company Need Not Furnish Certain Auxiliary Service. Decision of the NEW YORK SUPREME COURT, APPELLATE DIVISION, FIRST DEPARTMENT, Reversing the Commission's Decision. July 10, 1914. 148 N. Y. Supp. 583.

The history of the case and the Commission's decision was given in 5 RATE RESEARCH 291. The Court holds that

the company's reasons for refusing to furnish electrical current to the relator are untenable, and that the restrictive clause which it insists in inserting in its contracts, and to which relator objects, is contrary to public policy and invalid and constitutes in no proper sense a reasonable regulation respecting the use of the service which relator demands. . . .

129.3—Refusal of Service.

The Edison Company is a public service corporation holding a franchise from the state, and enjoying by reason of its public character certain valuable privileges not usually accorded to a private individual or corporation for its own individual benefit, not the least of which is the right to use the public streets and highways for carrying its conduits. Having undertaken to perform a public service and accepted special privileges in consideration of such undertaking, it is bound to serve impartially every member of the community who demands its service and stands ready to pay therefor and to comply with proper and reasonable regulations respecting such service.

Gibbs v. Baltimore Gas Co., 130 U. S. 396, 9 Sup. Ct. 553, 32 L. Ed. 979; Cent. N. Y. Tel. & Tel. Co. v. Averill, 199 N. Y. 128, 92 N. E. 206, 32 L. R. A. (N. S.) 494, 139 Am. St. Rep. 878. Not only is the company under this obligation at common law, but it is expressly required by statute to furnish electricity for lighting upon the application of the occupant of any building or premises within one hundred feet of its main or wires, as it is conceded that relator's premises are.

Section 62. Transportation Corporation Law. The same duty is

imposed by section 65 of the Public Service Commissions Law. As was said by the Supreme Court of the United States of a public service company:

It "must render the service for which it obtained its charter to those within reach of its facilities without distinction of persons." *Consumers' Company v. Hatch*, 224 U. S. 19, 32 Sup. Ct. 465, 56 L. Ed. 703.

It is urged by the company, and apparently agreed by the commission, that the company in any event is not obliged to furnish electricity for power and refrigerating purposes. This contention is based upon the language of section 62 of the Transportation Corporation Law, above cited, which refers only to the furnishing of electricity for lighting purposes. In our opinion, however, the company's duty to furnish service does not rest upon the statute alone, but upon the common-law obligation as a public service corporation which requires it to serve impartially every member of the community. It may be that, if it did not undertake to furnish electricity for power purposes to any one, it could not be coerced to do so. Upon that question we express no opinion. It does, however, profess and undertake to furnish electric current for power purposes, and this it does by virtue of its franchise as a public service company. So professing and undertaking, it cannot arbitrarily pick and choose whom it will serve and whom it will not. . . .

580—Terms and Conditions.

It is, of course, the rule that such a corporation may establish reasonable regulations respecting the use of the service which it proposes to furnish, and each customer requiring the service is called upon to comply with such regulations. In our opinion, however, the requirement that a consumer must take all of its electricity from one company, or receive none at all, is not in any proper sense a regulation respecting the use of the service, but is a purely arbitrary attempt on the part of the company to insure to itself a monopoly of furnishing electrical current. If the company can lawfully decline to furnish any current to this relator because he also proposes to obtain electricity from a neighbor (not a competing company) it can equally well refuse to furnish electrical current to a consumer who himself generates a part of the current which he uses. Such a limitation upon the company's obligation would, as it seems to us, be quite unreasonable. An exclusive clause similar in purport and intention to the one insisted upon by the defendant company was severely condemned upon grounds of public policy in *Cent. N. Y. Tel. & Tel. Co. v. Averill*, *supra*.

615.1—Limited Hour Service.

An attempt, not thoroughly successful, was made before the Public Service Commission to establish the fact that relator sought to use the company's current only during those hours that it would be most expensive to produce it. If that be so, the situation could be readily

met by establishing a rate for such service; but it is probably not so, for it surely must be that a very large proportion of the Company's customers use electricity only at night and not at all in the daytime, and yet no one would say that it would be reasonable for the company to refuse to furnish current unless the customers would undertake to use it during the whole 24 hours of each day.

REFERENCES

RATES

611.1—Residence Lighting.

DEALING WITH THE SMALL CONSUMER. Editorial, *Electrical World*, August 8, 1914, p. 263.

The problem of the small consumer is discussed. There is a consideration of the relative merits of meter and current-limiting device systems. It is said that the last word has certainly not been said either on the meter or the current-limiting device. The growth of business among small consumers is bound to bring improvements which will lessen the cost of both. Where the central station chooses one or the other scheme of operation to increase its business, it must make an effective campaign for cheap wiring, preferably with payment on the instalment plan, so as to make a definite fixed addition to the monthly bill, which will not fall heavily on even the smallest consumer if meters are used. The main point is to render as simple as possible the reading and billing, perhaps uniting in one man the meter reader and the bookkeeper. This result is well worth obtaining as part of the general program of making electric service a necessity rather than a luxury and bringing it close to all members of the community, rich and poor alike.

410—Cost of Service.

ELECTRICITY IN DRAINAGE PUMPING. *Electrical World*, 3 pages, August 8, 1914, p. 275.

The advantage of electric drive for the removal of water from agricultural lands is discussed. Tables are given showing data on first cost, and operating expenses of steam and motor driven pumping stations used for draining such lands along the Illinois and Mississippi Rivers. The article is illustrated.

410—Cost of Service.

COST OF GAS AND ELECTRIC LIGHTING COMPARED. *Electrical World*, $\frac{1}{3}$ page, August 8, 1914, p. 285.

Tables are given showing the comparative costs of gas and electric lighting on the basis of equivalent illumination in a large American city, where the price of gas is 80 cents net, and the price of electricity 10, 5 and 3 cents net.

INVESTMENT AND RETURN

395—Proceedings of Technical Associations.

MEETING OF MASSACHUSETTS ELECTRIC LIGHTING ASSOCIATION. *Electrical Review*, $1\frac{1}{2}$ pages, August 8, 1914, p. 281.

The annual report of the executive committee of the association is abstracted. It gives a comprehensive resumé of legislation proposed, enacted and defeated,

which has come before the General Court of Massachusetts at its session lately adjourned. Nothing seriously detrimental was enacted. A number of bills on the subject of municipal ownership were introduced, but did not pass. A bill authorizing the city of Brockton to establish a municipal plant failed of enactment. The following bills were rejected: Providing that no electric current shall be sold "at a price less than the total cost of production;" that a minimum price for electricity sold to the City of Boston shall not exceed the lowest price charged to any other corporation or person in said city; that no company shall allow any discount or rebate proportioned on the number of years for which a contract shall be in effect, and that the rates to any municipality shall not be varied because of the length of time for which the contract is made. Several bills to require that duplicate readings of meters be furnished to customers resulted in an act which provides that on request a record of readings be given customers. A bill to reduce the minimum charge for electric meters from \$9 to \$5 a year was rejected after passing one branch, also a bill which required all electric light wires to be placed underground before January 1, 1916. A bill for the burying of wires in Chicopee was referred to the next session of the Legislature. By an act, which was shorn of its original objectionable features, the City of New Bedford was required to bury its wires. The most important measure was the legislation initiated two years ago, to revise and codify the laws relating to the manufacture, transmission and sale of gas and electricity, and to bring hydroelectric companies under the same regulation as that provided for the lighting companies.

315—Intangibles.

RECENT DEVELOPMENTS IN PUBLIC SERVICE REGULATION, by L. R. NASH. *Stone and Webster*, 2½ pages, August, 1914, p. 132.

This summarizes the important developments in some of the principles involved in the valuation of public utilities during the past year. Special attention is drawn to the rulings on going value in the Public Service Gas Company case (see 3 RATE RESEARCH, 394), and the Kings County Lighting Co. case (see 5 RATE RESEARCH, 19), and to the United States Supreme Court ruling on water rights in the San Joaquin Case (see 5 RATE RESEARCH, 137, 252).

330—Capitalization.

COST OF MONEY TO PUBLIC UTILITIES, by HENRY DEARBORN, JR. *Chamberlain's*, 2½ pages, July, 1914, p. 44.

The factors affecting the cost of money to public utility corporations are considered. It is pointed out that in the majority of the states, probably in all of those where public utilities are regulated, the law compels constant expansion of facilities and a corresponding increase in investment. It is held that public utility corporations should be permitted to earn a reasonable return upon the stockholders' investment, and considering the hazards, that return should be at least as much as the average earning capacity of the national banks of the country, or between nine and ten per cent.

310—Valuation.

FOLLOWING THE CROWD IN THE VALUATION OF PUBLIC UTILITIES, by LOUIS L. TRIBUS. Communication to the *Engineering News*, 1 page, August 6, 1914, p. 316.

The foolishness, in making valuations, of following any sets of rules or precepts or court declarations, without first giving a very thorough study and analysis to the particular case that may be under consideration is emphasized. It is pointed out that valuations are for three main purposes: (1) To secure for a community the control of a privately owned utility at a price reasonable to the public and just to the owner; (2) To secure for the public rates for service rendered, that shall be as low as possible, yet yield a fair business return upon the capital invested and brains used for management; (3) To establish a value upon which just taxes shall be levied.

To some extent, if the "signs of the times" do not change their indication of strong Socialistic tendencies, similar policies will soon obtain concerning other private enterprises that deal with commodities which have become necessities for public use.

The formulation of valuation rules is educational; the more that appraisal problems are studied, analyzed and described in detail, the better for law and engineering, and the better for clients. But those making valuations should beware of being sheep.

300—Investment and Return.

THE SPRINGFIELD (MO.) RATE DECISION. *Stone and Webster*, 3½ pages, August, 1914, p. 92.

According to this editorial, the recent Springfield decision is a matter of widespread interest as containing judgments wholly at variance with established business principles and opposed to the fundamental conceptions of equity—judgments which, should they become general, could have no other effect than of diminishing the prosperity of the whole American people. The Commission's action with regard to the rate of return, the value of the auxiliary steam plant, and holding company expenses, is criticised. It is said that by means of holding companies, local companies get the best perspective on their operations, the best judgment in the handling of their affairs, the best engineering skill, lower prices in purchasing their materials than they could otherwise obtain, better credit and lower rates when borrowing money, larger confidence among investors when seeking to obtain new capital, and innumerable other advantages.

300—Investment and Return.

SPRINGFIELD (MO.) COMPANY ASKS FOR REHEARING OF RATE ORDER. *Electrical World*, 1 page, August 8, 1914, p. 268.

The grounds on which the company is applying for a rehearing are outlined. The decision is declared to be in violation of the constitutions of the United States and Missouri. Although an administrative body, the commission, it is stated, exercised judicial powers. The value of \$300,000 placed on the property of the electrical department is questioned; the fair and reasonable present value is shown by the evidence to be largely in excess of that sum. The company also declares that the commission refused to value for rate-making purposes a large part of the property owned and used in the electric service. The various points in the Commission's valuation of the property, on which the company takes issue, are reviewed.

PUBLIC SERVICE REGULATION

200—Public Service Regulation.

DEVELOPMENT THROTTLED IN MISSOURI. *Electric Railway Journal*, 1-4 page, August 8, 1914, p. 272.

In a speech before the Commercial Club of Jefferson City, Missouri, William B. McKinley, President of the Illinois Traction System, stated that Missouri's laws affecting corporations act almost as a complete bar to the building of an interurban electric system. He cited especially the statute providing that not more than 10 per cent of the stock of a Missouri corporation can be held by a foreign corporation, and the public service law. He stated also that people are deterred from putting their money into a utility corporation with all its uncertainties if

they are restricted to 6 per cent dividends, if they win, and nothing at all if they lose. Why invest money in an untried and uncertain proposition when substantial loans upon lands return the investor from 6 per cent to 7 per cent on his money.

200—Public Service Regulation.

RESULTS OF PUBLIC UTILITY REGULATION IN CALIFORNIA. *Electric Railway Journal*, 1-3 page, August 8, 1914, p. 260.

The question "Does regulation hurt business?" was discussed by John M. Eshleman, president of the California State Railroad Commission, before the Chamber of Commerce of San Francisco on July 31. Figures were quoted to show that there had been a greater development of public utility enterprises since the commission had received jurisdiction over stock and bond issues (March 23, 1912), than during any other period of equal length in the history of the State. The Commission's policy in the matters of competition and rate-making is discussed. It is said that a public utility is monopolistic in its nature, as it deals directly with the individual. Alone, the individual is powerless. Simple justice requires that the State provide a tribunal to control the relations between the public utility and the individual patrons. It is pointed out that jurisdiction over public utilities should embrace the regulation of rates, service and finances, and that the question is no longer "Does regulation hurt business?" but has now become "Shall it be regulation or shall it be public ownership?"

224—Rate Regulation.

THE RAILROAD RATE CASE. *Chamberlain's*, $\frac{1}{2}$ page, July, 1914, p. 57; *Engineering and Contracting*, $\frac{1}{6}$ page, August 5, 1914, p. 33.

A brief analysis is given of the questions involved in the case and of the commission's decision.

224—Rate Regulation.

THE SHREVEPORT RATE CASE. *Chamberlain's*, 1 page, July, 1914, p. 25.

The decision of the Supreme Court in the Shreveport case is said to be merely one step more toward "the inevitable goal, the control of the railroads by one supreme authority." The history of the case and the chief points in the decision are given briefly.

200—Public Service Regulation.

THE INTEREST OF THE BANKER IN STATE REGULATION, by PARKER S. WILLIAMS. Abstract of an address before the Pennsylvania Bankers' Association, June 27, 1914. *Electric Railway Journal*, 2-3 page, August 8, 1914, p. 251.

One fact which makes applying the public service law less simple than might be, is that regulation enters the field when public service corporations are in full swing. Their stocks and bonds have been issued and outstanding for years—sometimes too generously issued perhaps, but generally in accordance with law as it existed prior to the limitations of to-day. Many of these enterprises were financed on bonds issued at a discount, with a bonus of stock thrown in. On the one hand there are utility companies so floated, asking commissions to fix rates to provide a return on the face value of all those securities; on the other, some commissions are disposed to restrict the rates to a bare return on the actual cost of the physical plant. Something fair between these extremes must be determined. Certainly the old method of financing was necessary to some extent. Within certain limits it was legal, and even if the speculative element which seemed essential to make the proposition attractive in the past is now cut out, the readjustment should not

be done in such a way as to put necessary and efficient utilities into bankruptcy. Regulation in the end, when the companies know how to deal with it, and the commissions know how to deal with it, unquestionably is going to make it possible for the companies to raise money on a better basis. Speculative value is not necessary for the future. Regulation is preferable to speculative conditions, assuming that regulation is worked out, and that it takes into account all the elements of value and all the questions that enter into the operation of utilities. We are not ready for state or municipal operation of many of our public utilities. Facts and experiences as to the character of service and the cheapness of service by private operation compare too favorably with the results of management capable of being affected by politics.

224—Rate Regulation.

THE RAILWAY RATE DECISION. *Engineering News*, $\frac{2}{3}$ page, August 6, 1914, p. 327.

The conclusions of the decision of the Interstate Commerce Commission on the petition of the railways in the territory east of Chicago to advance their freight rates an average of 5%, are briefly summarized. It is characterized as "one of the most important decisions ever handed down by the Commission." The Commission's suggestion that railways should sell all the properties they now hold that they cannot use for transportation purposes is said to be a plain intimation that the operating expenses of railways are being increased in some cases through the existence of graft in connection with the purchase of supplies of the acquirement of property. That there is some ground for this assertion recent investigations have proved. The Commission announces that it is itself conducting an independent investigation of this matter. The most important point in the whole decision is the explicit recognition of the Commission that the railways are entitled to charge rates high enough to earn a fair return on the capital invested, provided, of course, that the properties are honestly and efficiently managed.

112.1—Indeterminate Permits.

THE INDETERMINATE FRANCHISE OR PERMIT, by HALFORD ERICKSON. Portion of an address before the Ohio Electric Light Association, July 24, 1914. *Electrical Review*, 3 pages, August 8, 1914, p. 283.

The first part of Mr. Erickson's address abstracted from last week's *Electrical Review*, is referred to in 5 RATE RESEARCH 302.

This portion of the paper deals with the effect of the indeterminate form of franchise on amortization and other special charges; with the status of the municipality under the indeterminate permit; and with the effect of the indeterminate permit upon municipal ownership. It is pointed out that under a system of limited franchises of 20, 30 or 40 years, such as largely prevailed in Wisconsin prior to the adoption of the public-utility law, with its indeterminate-franchise feature, a public ratemaking body would be bound in adjusting the rates of a particular utility to consider the length of its franchise, and to make some provision for a fund during the remainder of the franchise period which would care for its possible destruction by the termination of such franchise period. By granting an indeterminate franchise subject to certain conditions until the property involved is taken over at a fair price, amortization charges become unnecessary. By making such permit exclusive during good behavior, adequate service at reasonable rates can be much more easily enforced. It is pointed out that one of the common criticisms of the present method of state regulation of utilities in Wisconsin is that under the indeterminate permit cities are shorn of their power to control their local utilities. This criticism is grounded upon ignorance of the provisions of the utility law, as well as of the powers which cities could exercise under the old franchise conditions. An analysis is given to show that quite the contrary of the assumption underlying this criticism is true; that the powers of municipalities over local utilities are greater now than they were in the earlier franchise period. With refer-

ence to the effect of the indeterminate permit or municipal ownership it is said that the taking over of a utility is so important a step that it is not likely to be taken merely because the machinery for doing so has been made less complicated. The question of whether the utilities will be taken over by the municipalities is much more dependent upon the attitude of the public, the municipality's financial condition, the way in which the existing utility is managed or operated, and upon whether there is in existence an effective and prompt system of regulation, than upon the machinery and processes by which the transfers are made. Under such regulation the service is likely to be better and the cost of operation lower under private than under municipal operation. When everything has been said, however, the fact remains that the indeterminate permit as a form of franchise affords more protection to both the public and the utilities than any of the various kinds of franchises by which it was preceded. In connection with the public-utility laws as a whole it constitutes a system of regulation that under existing conditions appears to be more in line with public interest and to lead to more equitable results to all concerned than any system of regulation with which we have so far had any experience.

200—Public Service Regulation.

HOUSE PASSES WATER POWER BILL. *Electrical World*, $\frac{1}{4}$ page, August 8, 1914, p. 265.

The provisions of the Adamson bill, relating to the construction of dams across navigable streams, which was passed by the House of Representatives on August 4, are outlined.

200—Public Service Regulation.

THE ATTACK ON PUBLIC UTILITY REGULATION. *Stone and Webster*, $2\frac{1}{2}$ pages, August, 1914, p. 90.

Reference is made to the attack of the Minnesota Home Rule League on regulation in Wisconsin, and to the declared intention of the democratic and republican parties in Idaho to amend the Idaho public service law. It is said that this country embarked upon public regulation in the greatest haste, with admittedly scant deliberation of the points involved. Gradually the policy has been invested with some sort of order and system, with a measure of balanced regard for all the different interests involved, but only in the end to be confronted with the danger of being disrupted. Laws have been framed by the National and State governments for the regulation of public utility companies, and, under the conditions prescribed by these laws, great amounts of capital have been invested. A radical change in the character of the laws is bound to create a feeling in the minds of those investing the capital that their money has been obtained under false representations.

MUNICIPALITIES

830—Public Ownership.

TOLEDO MUNICIPAL OWNERSHIP ORDINANCE CARRIED. *Electric Railway Journal*, 1-6 page, August 8, 1914, p. 272.

The results of the election at which Toledo voted for municipal ownership are given. The Toledo Railways & Light Company made no stand against the ordinance. This is in accord with the policy that has been followed. The officials desire that the people shall thoroughly understand the necessities of the city and the requirements imposed on the company, so that, once settled, the present question will remain settled. The ordinance merely expresses the will of the electors who cast their votes, and does not carry with it authority to issue bonds. Another election will be necessary on the bond proposition, a two-thirds vote being then required.

820—State Regulation of Municipal Utilities.

HOME RULE AND STATE REGULATION. Editorial, *Electrical Review*, August 8, 1914, p. 259.

The opposition to State regulation by advocates of home rule is discussed. It is said that if the principle of Commission regulation is accepted, it is evident that the idea of home rule is applicable only in the case of local utilities in communities of exceptional size. In smaller communities the expense of maintaining a body of men who shall devote their time to investigation and study of utility questions would be prohibited, and, moreover, such men would not have enough to do to fully occupy their abilities and energies. The local regulation of such utilities as railroads which operate in more than one community is not at all feasible. There is a consideration of the relative success of regulation of utilities by cities before state regulation began. The effect of the indeterminate permit upon municipal regulation is discussed.

810—Municipal or Local Regulation of Utilities.

SEVENTEENTH ANNUAL REPORT, DEPARTMENT OF GAS AND ELECTRICITY, CITY OF CHICAGO, 1913. Pamphlet, 115 pages.

This Board possessed certain regulatory powers up to 1914. The report gives the details of the city's electric light rate investigation, culminating in the Palmer report (see 3 RATE RESEARCH 118); and of the contention aroused over the rate which the city pays the Sanitary District for street lighting (see 5 RATE RESEARCH 158).

810—Municipal or Local Regulation of Utilities.

HOME RULE AGITATION IN WASHINGTON. *Electric Railway Journal*, 1-8 page, August 8, 1914, p. 273.

The City Commission of Tacoma, Wash., favors home rule as regards its public utilities, and has approved a motion of Commissioner of Finance Atkins, to write representatives of other cities to confer with the Tacoma Commissioners. Mr. Atkins is quoted as having said: "The Public Service Commission is a public service nuisance. It voted against our law hitting at strap-hanging on street cars, and it prevents the city from regulating the public service corporations as they should be. There is no reason why 140 persons, mostly farmers, in the House of Representatives, should pass laws that will prevent cities of 100,000 or more ruling themselves. When the State Public Service Commission comes into a city like Tacoma and tries to tell the city what it shall and shall not do in regulating its street railway traffic, it is time a halt was called. What do three men down at Olympia know about our local conditions that they should try to regulate us?"

830—Public Ownership.

MINORITY REPORT ON THE CROSSER BILL. *Electric Railway Journal*, 1-4 page, August 8, 1914, p. 254.

The minority report on the Crosser Bill, providing for municipal ownership of street railways in the District of Columbia, is discussed. The report criticises both the principle and the details of the bill. In speaking of the latter, it says that while the bill provides for the purchase of the existing roads by condemnation, nothing is said in the bill about the way in which the value of the roads is to be obtained, an omission which clearly indicates general carelessness and complete lack of business acumen on the part of the framers of the bill. It also says that no data were presented to the committee as to the probable amount of the award. The District Commissioners are also criticised for their "blind enthusiasm in advocating the general principles of municipal ownership," as well as their "gross carelessness in studying the structure of the bill." The committee believes the House of Representatives is entitled to more efficient service.

GENERAL

140—Relations of Corporations With Each Other.

PRELIMINARY REPORT OF THE DEPARTMENT OF PUBLIC SERVICE UPON INTERLOCKING CONTROL OF PUBLIC UTILITIES IN THE CITY OF CHICAGO, by MONTAGUE FERRY, Commissioner. July 1, 1914. Pamphlet, 9 pages.

The City Council on June 15 ordered the Commissioner of Public Service of the City of Chicago to present a report showing the capitalization, earnings, ownership and inter-relationship of the street and elevated railway, telephone, gas and electric light and power companies operating in the City of Chicago. The report includes a chart showing that a comparatively few men—notably Samuel Insull, Henry A. Blair and John J. Mitchell—occupy controlling positions in the gas, electric, street and elevated railway companies. The report discusses the relation of the utilities—the power contract between the Commonwealth Edison Company and the elevated railways, and the natural competition between the gas and electric utilities. It asserts that there are no facts to indicate that advantage has been taken of the close relationship of the companies, but suggests that such advantage might be taken. There is a discussion of the question of consolidations. The advantage of monopoly and economic wastefulness of competition is considered. It is said that in approaching the problems of public utility regulation, it seems desirable to clearly distinguish between consolidations which are in obedience to the natural law of economics, which requires that industry be so organized as to obtain the greatest value in product at a given expenditure in capital and labor and what may be called artificial monopolies, organized under the law or in an evasion of the law to do away with competition to resist regulation and to exact more than a fair equivalent for what is given. The one should be encouraged—the other, so far as can be, made impossible. The importance of an effective system of rate and service regulation arises from the fact that most consolidations have a justification on economic grounds and being formed seek the advantages which come from monopoly and from the control in a few hands of a large capital.

770—Safety of Service.

SAFETY FIRST: A SYMPOSIUM, Presented at the Tenth Annual Convention of the Southwestern Electrical and Gas Association, Galveston, Texas, May 20–23, 1914. Pamphlet, 34 pages.

This symposium, discussing safety of service from the viewpoint of virtually all kinds of public utilities and of the public and the press, has been published in pamphlet form by the Southwestern Electrical and Gas Association. The following papers are included:

Safety First from the Operating Side, by R. T. Sullivan.

Safety First: the Electric Light and Power Side, by F. N. Lawton.

Safety First from the Gas Company Side, by F. L. Weisser.

Safety First from the Claim Department Side, by H. W. Withers.

Safety First from the Side of the Public, by H. T. Warner.

112—Franchises.

THE KANSAS CITY FRANCHISE, by PHILLIP J. KEALY. *Electric Railway Journal*, 2½ pages, August 8, 1914, p. 255.

In this communication to the *Electric Railway Journal*, Mr. Kealy, engineer for the receivers, challenges Delos F. Wilcox' criticisms of the new Kansas City franchise (see 5 RATE RESEARCH 287).

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RATE RESEARCH



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Rate Research

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Rate Research

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For statement of facts and opinions contained in papers abstracted herein, the Association does not hold itself responsible

RATES

PITTSBURG, PENNSYLVANIA

720—Rate Schedules.

Schedule of Rates of the DUQUESNE LIGHT COMPANY for Electric Service in Pittsburgh and Surrounding Municipalities, Effective July 1, 1914.

RESIDENCE LIGHTING

Schedule A.

Rate:

11 cents per kilowatt-hour for current consumed.

Prompt Payment Discount:

1 cent per kilowatt-hour on bills paid within ten days from date.

Minimum Charge.

50 cents for the first fifteen lamp outlets or less, and
25 cents additional for each ten additional lamp outlets.

Lamp Service:

Carbon lamp renewals in 8, 16 or 32 C. P. sizes are furnished free of charge.

Schedule B.

Rate.

Demand Charge.

15 cents per month for each room and main hall on first floor, and
5 cents per month for each room on upper floors, bath rooms and halls
excepted and
2 cents for each lamp outlet in excess of 50.
In apartment houses, bed rooms and bath rooms shall be considered as
upper floor rooms, and all other rooms and halls shall be considered as first
floor rooms.

Energy Charge.

6 cents per kilowatt-hour for current consumed.

Prompt Payment Discount.

1 cent per kilowatt-hour on bills paid within ten days from date.

Minimum Charge.

Contracts under this schedule will not be made for a fixed service charge of
less than 65 cents per month.

EDITORIAL NOTE.—All indented matter is direct quotation.

Lamp Service.

Carbon lamp renewals in 8, 16 or 32 C. P. sizes are furnished free of charge.

Schedule C.**Controlled Flat Rate.****Rate.**

1.1 cents per month per watt of demand.

Prompt Payment Discount.

.1 cent per watt of demand on bills paid within ten days from date.

Minimum Charge.

Contracts will not be written for less than 100 watts nor more than 2,500 watts demand.

The Company will install an instrument to limit the customer's demand to that contracted for.

RETAIL LIGHT AND POWER.**Rate.**

The rates range from 11 cents to 8 cents per kilowatt-hour, with a 1 cent prompt payment discount for payment within ten days when certain monthly amounts are guaranteed, depending on the kilowatt demand of from 1 to 15 kilowatts; $6\frac{1}{2}$ cents to 5 cents per kilowatt-hour with a $\frac{1}{2}$ cent prompt payment discount when certain monthly amounts are guaranteed, depending on the kilowatt demand of from 1 to 15 kilowatts, and $4\frac{1}{4}$ cents to $2\frac{1}{4}$ cents per kilowatt-hour with a $\frac{1}{4}$ cent prompt payment discount when certain monthly amounts are guaranteed, depending on the kilowatt demand of from 1 to 15 kilowatts.

The amounts of the guarantee are given in a table in the schedule.

Determination of Demand.

For installations of 1 kilowatt to 5 kilowatts, the demand may be taken as 100% of the connected load.

For lighting installations of more than 5 kilowatts and less than 20 kilowatts, the demand may be taken as 80% of the connected load.

For one motor of more than 5 kilowatts and less than 20 kilowatts rated capacity, the demand may be taken as 80% of its rated capacity.

For two or more motors aggregating more than 5 kilowatts and less than 20 kilowatts rated capacity, the demand may be taken as 75% of the combined rated capacities of the motors.

For elevators, or any other service having similar characteristics, the maximum demand shall be determined as follows:

Where one motor is used, the rated capacity of such motor shall be taken as the maximum demand of the service.

Where two motors are used in the same service, 90 per cent of the combined rated capacities of such motors shall be taken as the maximum demand of the service.

Where from three to five motors are used, in the same service 75 per cent of their combined rated capacities shall be taken as the maximum demand of the service.

Where from six to ten motors are used in the same service, 50 per cent of their combined rated capacities shall be taken as the maximum demand of the service.

Where more than ten motors are used in the same service, the maximum demand may be measured.

INTERMEDIATE LIGHT AND POWER.

Rate.

The rates are given in the same manner as in the retail light and power schedule, ranging from 11 cents to $1\frac{1}{8}$ cents, with a discount of from 1 cent to $\frac{1}{8}$ cent when certain monthly amounts are guaranteed, depending on the kilowatt demand of from 20 to 50 kilowatts.

Determination of Demand.

For installations of more than 20 kilowatts, the demand shall be taken as 75 per cent of the connected load, except where demand is determined by measurement.

For elevator service, the demand is determined as in the schedule for "Retail Light and Power."

WHOLESALE LIGHT AND POWER.

For installation of 20 kilowatts of demand and over.

Rate.

Demand Charge.

\$1.00 per month per kilowatt for the first 100 kilowatts of demand.

.50 per month per kilowatt for each kilowatt of demand, in excess of 100 kilowatts.

Energy Charge.

2.2 cents per kilowatt hour for the first step or quantity block of energy delivered each month for each demand.

1.1 cent per kilowatt-hour for the first step or quantity block of energy delivered for each demand.

.5 cents per kilowatt-hour for all energy delivered each month in excess of these quantities.

For 20 kilowatts of demand, the first step is 2,000 kilowatt-hours, and the second step 4,000 kilowatt-hours, and the third step all excess demand.

For 50 kilowatts of demand, the first step is 4,400 kilowatt-hours, and the second step 8,800 kilowatt-hours, and the third step all excess demand.

For 100 kilowatts of demand, the first step is 7,400 kilowatt-hours, and the second step 14,800 kilowatt-hours, and the third step all excess demand.

For 400 kilowatts of demand, the first step is 19,400 kilowatt-hours, and the second step 38,800 kilowatt-hours, and the third step all excess demand.

Determination of Demand.

For general service on installations of more than 20 kilowatts, the demand shall be taken as 75 per cent of the connected load, except where demand is determined by measurement.

For elevator service, the maximum demand is determined as in the schedule for "Retail Light and Power."

Underground Service.

For service delivered in the Underground District, 10 per cent shall be added to all bills computed under this schedule.

Prompt Payment Discount.

For payment of bills within 10 days from date thereof,

2 mills per kilowatt-hour for all energy billed at 22 mills per kilowatt hour;

1 mill per kilowatt-hour for all energy billed at 11 mills per kilowatt-hour.

No discount will be allowed on energy billed at 5 mills per kilowatt hour.

MUNICIPAL LIGHTING OR POWER SERVICE.

Service supplied under this schedule shall be for municipalities for municipal purposes only.

Rate.

5 cents per kilowatt-hour for current consumed.

Special Schedules are given for flaming are lighting, controlled flat rate commercial lighting, flat rate incandescent lighting for temporary or transient service, flat rate signs lighting, flat rate are lighting for use during construction work, for schools and churches, for hospitals and charitable institutions flat rate fan service, and off peak garage rate for domestic electric automobile charging.

COMMISSION DECISIONS**NEW HAMPSHIRE****335—Issues of Stock and Bonds.**

LACONIA GAS AND ELECTRIC COMPANY, Petition for Authority to Issue Bonds. Decision of the NEW HAMPSHIRE PUBLIC SERVICE COMMISSION, Making a Valuation of the Company's Property and Authorizing the Issue. December 22, 1913.

In making the application for authority to issue bonds, the company submitted a summary of expenditures on its property. In regard to certain items listed the Commission says:

For the purpose of extending its business the petitioner has employed solicitors in both its gas and electric departments to solicit new business, and has charged the expense of such soliciting to the "engineering" accounts upon its books. For the purpose of encouraging the use of gas stoves, it has done a certain amount of piping upon the consumer's premises without charge. Both classes of expenditures it claims the right to capitalize as necessary costs of building up its business.

315.1—Going Value.

Are items of this class capitalizable? This is the other end of "going value." In rate cases utilities always claim the allowance of an item so designated in addition to the value of their physical properties, and in this item, as claimed, are always found allowances for "advertising", "soliciting", free piping" and the like. Some commissions in valuing properties have held that such an addition should be made. If the costs mentioned are to be added to plant values in valuation of utility properties for rate purposes, and rates sufficient

to allow a fair annual return thereon are to be allowed, then they should be capitalized and not allowed to be charged to operating expenses.

The reason is obvious. Rates pay both operating expenses and return on plant value. If additions to plant value are made from year to year out of operating expenses and returns earned on such added value, it is evident that the public will be taxed to pay returns upon value created by the public. The capitalization of advertising and other like expenses is logical and in fairness to the public is inevitable, if attached business is always to be considered as giving a "going value" item which must be added to value of physical properties for rate purposes.

But we do not so hold. "We believe that there is no constitutional rule nor any equitable reason requiring an appraisal of the entire expenses of building up all of the business connected with a utility property, in a valuation of the same, upon a strict reproductive cost basis, but that much weight should be given to the amount which the building up of such business, in the way it has actually been built, has actually cost the owners of the property, either in money originally invested by them or in returns not received upon their investment in early years." Petition of Berlin Electric Light Company, N. H. P. S. C. Reports, Vol. 3.

In any case, therefore, to the extent that the expense of procuring business has been paid as an operating expense out of earnings, in addition to the payment of a fair return to the utility, attached business will ordinarily be wholly disregarded in fixing value for rate purposes. Accordingly it becomes merely a question of economic policy whether expenses of this sort should be classed as operating expenses and paid out of earnings, or as capital expense and paid out of the proceeds of securities issued.

The life of a utility may be as prolonged as the life of the municipality in which it is situated. For the proper determination of all questions affecting either the municipality or the utility a long look ahead must be taken. Upon any such view it must be recognized as not desirable that a utility should capitalize every expense incident to procuring an increase of business. A few decades of such practice would result in a large volume of securities outstanding and representing no tangible property.

Any business concern must make certain expenditures for the purpose of promoting a sale of its product or service. The necessity for this may be less in the case of a public utility business than in most others, but so far as the necessity for such exists the expense is just as truly incident to continued successful operation as the expense of good management or good methods of manufacture or of distribution. It should be recognized as an operating expense and paid from income rather than capitalized and made a constantly increasing burden upon the rate-paying public. The utilities them-

selves have heretofore recognized this fact. This is the first case where we have found these costs charged to capital accounts.

788—

SERVICE RULES

ARIZONA

OVERHEAD LINE CONSTRUCTION, Order of the ARIZONA CORPORATION COMMISSION, Establishing Rules for Overhead Line Construction, June 23, 1914.

The Commission has issued an order requiring that all telephone, telegraph, signal, trolley, electric light and power lines within the state be constructed and maintained in conformity with the specifications applying to such construction contained in the report of the Committee on Overhead Line Construction of the National Electric Light Association, at its 34th convention, held in New York City, May 29 to June 2, 1911. Construction now completed in the state is to conform to such specifications within a period of five years from the date of the order. In adopting these rules, the Commission says:

The prominence of the engineers who have given to developing the N. E. L. A. report, the voluntary adoption of the suggestions contained therein by the more progressive public service corporations and the recognition given it by State Commissions, [Connecticut, Nevada, New Jersey, New York, Oklahoma, Oregon, Vermont and Wisconsin are mentioned as having issued orders which embody in all essentials the recommendations made by this committee], all unite to establish it as an authoritative guide to safe, durable and efficient line construction, from which departures should be made only to meet extraordinary, or abnormal local conditions. . .

REFERENCES

RATES

450—Value of the Service.

THE BASIS OF RATES FOR ELECTRICITY, by NEWTON HARRISON. *The Central Station*, 3 $\frac{3}{4}$ pages, August, 1914, p. 27.

The value of service theory in electric rate making is advocated, reference being made throughout the discussion to the Rate Research Committee Report (See 5 RATE RESEARCH 171, 204). It is pointed out that a profitable reduction in rates is one through which more business results, because of its popularity to that class or others which it affects, and the growth of more consumers through the greater ease of canvassing, who do not increase the expense, but the profit. Rate makers really comprise a select, scientific and exceedingly capable class of men. In large industries, department stores and public utilities, the rate making or setting of prices is a delicate and exceedingly responsible business. Rates seem to be indicative of a state of mind on the part of the sellers, as well as a certain business condition internally satisfactory and profitable. It does not seem desirable for concerns to amass swollen fortunes as a surplus. It does not seem desirable for a selling concern to intend to act upon the public as a unit to be forced. The idea of compulsion creates antagonism and competition. There can

be an agreeable, confidence-breeding relationship between the seller and the classes supplied. This constitutes idealism in business, the seller, with the full knowledge of the consumer, taking only a profit which he himself would take. And this state of affairs is not only most desirable, but the inevitable way which will result from the proper attitude of one to the other.

400—Rate Theory.

THE COMPUTATION OF THE COST OF CURRENT, by HUGO EISENMENGER. *Electrical Review*, 5 pages, August 15, 1914, p. 335.

The immensely complicated character and impracticability of an exact expression for the cost which every consumer causes to the central station is pointed out. The question of the simplification of this theoretical basis for the requirements of practice is discussed. In the case of almost all rates, the complete expression is simplified in such a manner that not more than three terms (1) that expressing the cost of billing and collecting, meter reading, etc.; (2) that representing the amount of energy annually consumed by the customer, and (3) the maximum demand of the consumer at central station peak-load, are considered. These terms, however, are considered in such a way that the sum of the cost of all consumers which results from the simplified formula is not changed as compared to the actual total cost. One has, therefore, to distribute the average value of the neglected terms per consumer in some way over the first terms. Thus, for instance, the cost for those consumers which are situated close to the central station is increased in favor of those who are situated further away, etc. The result of the diminution of the number of charges is discussed, and the statement made that, in general, experience has shown that the introduction in one or the other way of all three fundamental charges mentioned is the most advantageous compromise between the contradictory requirements of accuracy and simplicity of the rates. In the determination of the numerical values of the cost, the arbitrary distributions, generally made, may be done away with if the analytic method is employed. This method is described in detail.

224—Rate Regulation.

THE ADVERSE FREIGHT RATE DECISION AS AN INCENTIVE TO SPEEDY COMPLETION OF RAILWAY APPRAISALS. *Engineering and Contracting*, August 12, 1914, p. 145.

The completion of the appraisals of the railroads in as short a time as possible is urged, on the ground that the somewhat adverse freight rate decision has left the eastern railways with scant hope of an advance in rates until appraisals demonstrate the necessity of greater income, if there is to be a "fair return" on the value of their investments. It is said that as fast as each railway completes its appraisal, it should ask for increments in rates—both interstate and intrastate—if existing rates do not yield a "fair return."

720—Rate Schedules.

ELECTRICITY AND APPLIANCES IN SOUTH OF IRELAND. *Daily Consular and Trade Reports*, 1 page, August 11, 1914, p. 816.

The electric undertakings of the cities of Queenstown and Cork are briefly described. The city of Cork is receiving current at a less price than Queenstown, which the company claims is because the cost of operating the Queenstown plant is greater, owing to the small population. The rates are given herewith:

Cork.—For lighting, 10 cents per unit, including supply and renewal of carbon filament lamps, with 2 cents and 4 cents per unit discount for certain amounts of consumption. For power, the rate is 4 cents per unit up to 1,000 units per quarter; 3 cents up to 2,400 units; $2\frac{1}{2}$ up to 5,400 units; and $2\frac{1}{4}$ cents when over 5,400 units are consumed. The flat rate for cooking and heating is 2 cents. Small rents are charged for meters. The voltage for lighting is 230; for power, 460.

Queenstown.—Flat rate of 12 cents per unit or 10 cents for "short day" in shops and 9 cents for hotels and "long hours" in shops.

720—Rate Schedules.

ELECTRIC RAILWAYS IN HAMBURG. *Daily Consular and Trade Reports*, 1 page, August 7, 1914, p. 750.

A general description of the Hamburg Railway undertakings is given. There are 23 stations on the main line and 12 on the branch lines. The fares are as follows:

- 2.38 cents for five stations, third class.
- 3.57 cents for five stations, second class.
- 3.57 cents for ten stations, third class.
- 4.76 cents for 10 stations, second class.
- 4.76 cents for more than 10 stations, third class.
- 7.14 cents for more than 10 stations, second class.

Before 7 o'clock a. m. tickets for workmen are issued in third class only at 2.38 cents, good for any distance. When purchasing these tickets, return tickets at the same price can be purchased which can be used at any time of the day of purchase. Tickets good for a week for these early trains cost 13 cents, and return tickets available at any hour of the day 27 cents. Commutation tickets for all trains at all hours of the day are also sold at the following rates:

- For eight stations, third class, \$19.04 per year.
- For eight stations, second class, \$26.18 per year.
- For each farther station, \$1.19 third class and \$1.67 second class in addition.

A ticket good for any distance at all hours of the day costs 150 marks (\$35.70) third class and 200 marks (\$47.60) second class per annum.

400—Rate Theory.

CO-OPERATIVE RATE MAKING SCHEDULES, by WM. VAN DEN HEUVEL. *Journal of Electricity, Power and Gas*, 5½ pages, August 8, 1914, p. 121.

After a discussion of the several factors governing rate making and a criticism of the sliding scale, maximum demand, flat rate and readiness to serve schedules, a proposed co-operative rate schedule is analyzed by the author. It is held that the co-operative schedule proposed will cause a more equitable distribution of the charges that make up the total gross income as derived from all customers under a system, and a gradual reduction of rates as the logical result of co-operative effort. The article is accompanied by curves showing the maximum demand or load factor schedule, cumulative sliding scale schedule, the proposed co-operative rate schedule and a co-operative schedule for irrigation service.

500—Rate Practice.

RATE SCHEDULES OF DIFFERENT COUNTRIES, by G. SIEGEL. Abstract of article and editorial, *Electrical World*, 1 page, August 15, 1914, p. 340 and p. 310.

A recent article, published in the *Elektrotechnische Zeitschrift*, is abstracted. The author points out that the rates in use in different countries depend on the local commercial, climatic and geographic conditions of the country and that the nature of the rate also indicates the extent and the importance of electricity supply in the country. From these viewpoints the author discusses rates in use in various European countries.

The editorial states the conclusion that the electric rate is actually determined on principles wholly commercial as are the prices of any other commodity. Looking over Dr. Siegel's data, it at once appears that, on the whole, throughout the world the tendency is toward a rate based on a standby charge plus a meter charge in the larger stations, while a flat rate or discounted meter rate is the rule in the smaller stations. Perhaps the lesson to be drawn is that on heavily loaded sys-

tems the standby costs are far more keenly felt than in small plants where fully loaded apparatus and lines are the exception. Flat rates either by contract or by meter are decidedly the exception in all countries. But the demand idea has undergone an interesting evolution which shows at least an elementary recognition of its one-sided character. In theory the measured demand is what really determines the standby costs, in so far as these are unrelated to the time of their occurrence. In practice it seems to have been the general rule that for the purpose of fixing rates the demand is taken in some arbitrary and conventional manner. Just what form is given to it depends upon circumstances, and the usual result is probably nearer to a just average charge than the measured demand would be. The point of greatest variation in rate schedules seems to be the relation between the lighting and motor-service charges. Dr. Siegel's data make it evident that such variations are general phenomena, and that there is great need to arrive at standard methods of reckoning so that in two neighboring or even contiguous communities there may not be wide differences in charges for similar services.

INVESTMENT AND RETURN

300—Investment and Return.

RISK AS AN ELEMENT OF RATES AND FARES. *Southwestern Electrician*, 1 $\frac{1}{2}$ page, August, 1914, p. 25.

Emphasis is laid upon the fact that at present utilities are in a state of instability and insecurity that tends to label them as investments involving an "extraordinary risk." The influence of the attitude of the community on the relative stability of a utility is discussed. It is urged that the company should place itself in an invulnerable position—make its service as complete, as certain, as accommodating and as cheap as its facilities, its command of capital, its local conditions and the "fair commercial profit" of its community will allow—and then "stand pat" on its commercial right to be treated as legally, as equitably, even as liberally, as any other private commercial enterprise in the community. Charters and franchises give no right to injustice or inequity, and the public must be made to realize this fact, which has been blurred, befogged and hidden by self-hypnotized theorists, by blatant demagogues and aspiring politicians.

PUBLIC SERVICE REGULATION

200—Public Service Regulation.

THOSE "GOOD OLD DAYS," by ROBERT M. LA FOLLETTE. *Wisconsin State Journal*, August 7, 1914.

In the above article, which is reprinted from La Follette's Weekly, Senator La Follette attacks E. L. Philipp, Republican candidate for governor, on the grounds of his leadership of the political machine which opposed progressive legislation during La Follette's governorship. The article gives an interesting side-light on the circumstances surrounding the passage of the laws creating the Railroad and various other commissions. A comparative statement is given showing the preponderance of the amount of money saved by the commissions over the amount which they cost.

200—Public Service Regulation.

WISCONSIN GOVERNMENT—COST AND EFFICIENCY, by L. B. NAGLER. *Equity News*, 2 pages, August 1, 1914, p. 465.

The agitation concerning cost of government in Wisconsin is commented upon. It is held that the cost of government in Wisconsin compares very favorably with other states. The state has been criticized for having too many "commissions." The fact is, Wisconsin has fewer such departments than either Minnesota, Mich-

igan, Illinois, Indiana, Ohio, New Jersey, Massachusetts, Florida, Missouri or California. No state comparable with it in wealth and population has its government so compactly organized for efficiency and economy. This is acknowledged everywhere by fair minded people, as is amply attested by newspapers and magazines throughout the country. Charges of extravagance are equally unfounded.

200—Public Service Regulation.

POLICIES OF REGULATING BODIES, by EDWIN GRUHL. Article and Editorial. *Aera*, 11 pages, August, 1914, p. 24 and p. 5.

The action of various commissions with regard to rate of return is considered. The conclusion drawn is that these comparisons indicate a recognition upon the part of several of the commissions of the necessity of allowing a rate of return in excess of returns referred to in reviews of similar decisions by the courts as "not confiscatory." How liberal such additions are would be difficult to determine. Rates of return which will attract capital will vary with the size and kind of utility and with its location. It is to be expected also that the returns allowed upon applications to increase rates will be lower than returns permitted where the rates in themselves are reasonable and the service adequate. There have been few cases where the commissions have determined the existing rate of return to be unreasonably high and these, it is noted, are all in excess of 12 per cent, upon the estimated rate-making value. In regard to the attitude of commissions toward value for rate-making purposes, it is held that methods adopted are very divergent; that recent court decisions have assisted somewhat in reconciling conflicting theories of rate-making value. In the meanwhile there has also been a recognition of the limitations of engineering appraisals and commissions such as Wisconsin, New Jersey and Nebraska have increased the usual percentages added to cover overhead costs and shortcomings in the inventory. Considerable further progress will have to be made, however, before definite valuation policies will be available.

The paper is to be continued in the next number of *Aera*.

265—Co-operation of Public Service Companies with Regulatory Bodies.

THE SPRINGFIELD RATE CASE. Editorial, *Electrical World*, August 15, 1914, p. 310.

This states that the petition of the Springfield company for a rehearing presents the argument with a noticeable absence of the byplays to the galleries which encumbered the original decision of the commission. The answer of the company was dignified; the decision of the commission was plainly deficient in that dignity, which should characterize the rulings of a body having such vast powers. It has come to be the practice of some of the commissions, whenever the way is open, to "roast the corporations." This is an easy way of acquiring notoriety. It should be just as fair for the companies to criticize commissions guilty of dereliction or actions taken with an eye to the unthinking public applause as for commissions to attack companies. It is urged that the commissions and the companies co-operate to develop the best properties and service to the end that all interests concerned may be conserved and protected. Few of the commissions are deeply sunk in politics, but those that permit their conclusions to be spoiled by political considerations do much to discredit the policy of regulation.

MUNICIPALITIES

840—Public Operation.

CRITICISM OF SEATTLE LIGHTING DEPARTMENT COST DATA. *Journal of Electricity, Power and Gas*, 1½ pages, August 8, 1914, p. 131.

In this communication to the editor of this magazine, facts and figures are given to show that the cost figures in the 1912-13 report (see 5 RATE RESEARCH 238)

of the Seattle Municipal Plant, are in a great many cases inaccurate and full of "the sins of omission and commission." It is said that these costs are in many instances very low and give the impression that the municipal lighting plant of Seattle has been constructed at a remarkably low cost. These hydroelectric costs data are, however, not founded on facts, and a study of them will disclose that the superintendent has drawn on his imagination in order to show low costs. In order that such costs shall be of any value at all, they must be based upon facts and absolutely square with the truth.

830—Public Ownership.

MUNICIPAL OWNERSHIP: FIRST HAND INFORMATION FOR OUR READERS. *Union Labor Advocate*, $\frac{1}{2}$ page, July 17, 1914, p. 8.

Letters from labor officials in Edmondton, Lethbridge, and Saskatoon, Canada, arguing against municipal ownership, are quoted. The conclusion drawn is that municipal ownership especially of street railways, having been absolutely discredited in the house of its friends, should not be advocated for the city of Washington.

830—Public Ownership.

EDITORIALS ON THE CROSSER BILL. *Aera*, 3 pages, August, 1914, p. 1.

These editorials contend that if any measure is to be considered with a single eye to the good of the entire country, with partisanship eliminated and prejudices and rancor laid aside, it is such a measure as the Crosser bill. A reading of the document, however, shows that no such careful consideration has been given. The report is *ex parte*; is the plea of an advocate, rather than the judgment of the unprejudiced. It is an effort to establish a theory, not a discussion of facts having as its object the arriving at a correct solution. It almost flippantly wipes aside all arguments against the proposition and establishes conclusions which it fails to support. As an aid to Congress in a calm, judicial discussion of the pros and cons of municipal ownership, it is without the slightest merit. The document should be a careful consideration of the proposition in which the arguments for and against are carefully weighed and conclusions conservatively drawn from the facts set forth. It actually is the spread eagle, demagogic utterance of a number of men wedded to an idea which they support rightly or wrongly for purposes of their own. As a stump speech it may fill its purpose. As a report on a matter referred to a committee for its investigation in order that Members of Congress may vote intelligently on a question which involves not only millions of dollars of other people's money, but which establishes a precedent and gives the endorsement of the nation's lawmaking body to new principles and new rules of conduct, it is so futile as to be absurd.

830—Public Ownership.

MINORITY REPORT ON CROSSER BILL. Article and Editorial, *Electric Railway Journal*, $4\frac{1}{2}$ pages, August 15, 1914, p. 292 and p. 286.

The minority report of the Crosser Bill, providing for government ownership of street railways in the District of Columbia, is abstracted.

The editorial calls attention to the striking contrast existing between the majority and minority reports. It is said that whereas the bulk of the majority report (thirty out of thirty-five pages, to be exact) was devoted to a general exploitation of economic theories regarding public ownership and only 2 inches to an unsupported conclusion of seven points concerning the District railways, the minority report confines itself specifically to the proposed bill, its faulty construction and the advantages claimed by its proponents. The majority report is at best an incomplete and unauthoritative discourse on the general principle of government ownership, while the minority report is a complete analysis of the proposal, good or bad, as it relates to the matter actually under consideration. In other words, it deals with the facts. This difference is worthy of note as being characteristic of two modes of thought—the loose and the analytical.

GENERAL**920—Economy and Efficiency.**

HYDRO-ELECTRIC POWER COMPARED WITH STEAM, by REGINALD PELHAM BOLTON. Reprinted from the Transactions of the American Society of Heating and Ventilating Engineers, 1914. Pamphlet, 12 pages.

Enthusiastic conservationists, in arguing for the development of water power at public expense, fail to take into account many practical questions. Steam power is really cheaper than hydro-electric power. Official statements have been widely published as to the large quantities of power existing in water falls and rapids in this country. These statements always fail to convey the necessary information that the power is stated in terms of water horsepower, which is very different to the unit of generated energy. It is officially asserted that there is in use in this country, a force of six million water horsepower. Most of this power is situated in districts remote from the place of commercial usage. It must be transformed from water horsepower into electrical horsepower, transmitted over certain distances, and finally distributed to the consumers. Any comparison as to its commercial or relative value as compared with fuel must be made upon the basis of the distributed and utilized energy which could be generated upon the spot by the use of fuel. The report of the Seattle plant, figures concerning hydro-electric plants in Ontario, and case No. 169 of the New York Commission for the Second District, are cited in proof of this. It is pointed out that hydro-electric plants are less reliable than steam, and require investment in reserve steam plants. There is, therefore, comparatively little value in the broad assumptions of conservationists on the subject of "white coal," "harnessed energy" and "conservation" of water powers. If similar publicity could be secured for the chastening reflections accompanying exact figures and observations of comparative costs, and of the possibilities of economic fuel utilization, as that which is given to the assumptions of uninformed enthusiasts, it would doubtless change the general view of "conservation" as applied to the white coal, the harnessed energy, the glittering dew drops and the conservation of fuel by water power.

This pamphlet may be procured from the Bureau of Public Service Economics, 17 East 38th Street, New York.

910—Promotion and Growth of the Business.

RECOMMENDATIONS OF COMMITTEE FOR LONDON ELECTRICITY SUPPLY, *Electrical World*, $\frac{1}{2}$ page, August 15, 1914, p. 312.

The conclusions of the special electricity committee of the London County Council on the suggestions of the Merz-McLellan report, are discussed. The principle of the scheme outlined by the committee is that the machinery to be set up with the object of bringing the new undertaking into existence should provide for a combination of municipal ownership and control with private operation. The committee is of the opinion that the efficient and profitable working of the undertaking in the interest of all concerned will be secured most effectively by the adoption of an arrangement under which the capital shall be provided in definite proportions by the authority and a company. The company would have possession of the whole of the undertaking, including any undertakings acquired for a definite period, subject to full powers of control and supervision by the authority. The authority should advance as a loan two-thirds of the capital required for additions and betterments, while the remaining one-third should be furnished by the company. It is suggested that the whole of the money required for the transfer of existing undertakings should be provided by the authority. The authority would be empowered to resume possession of the undertaking at the end of the term of the contract on payment to the company of a sum equal to the capital provided by it for the purposes thereof. The arrangement provides for complete ultimate ownership by the authority. The committee emphasizes that its scheme represents a combination of municipal and private enterprise designed to insure full control by, and an adequate share of profits to, the public with the flexibility and commercial enterprise of company management.

140—Relations of Corporations with Each Other.

HEARING ON SEPARATION OF WASHINGTON UTILITIES, *Electrical World*, $\frac{1}{4}$ page, August 15, 1914, p. 312.

The suggestion of Representative Prouty of Iowa that the two companies, instead of being forced by an act of Congress to separate, be allowed to consolidate, is noted.

730—Terminology.

STANDARDIZATION RULES OF THE AMERICAN INSTITUTE OF ELECTRICAL ENGINEERS. *Proceedings of the A. I. E. E.*, 82 pages, August, 1914, p. 1217.

The history of the standardization rules is given briefly. The rules are given under the following headings: definitions, symbols and abbreviations, classification of machinery, standards for electrical machinery, kinds of rating, heating and temperature, temperature limits, additional requirements, wave-form, efficiency and losses, determination or approximation of losses, dielectric tests, insulation resistance, regulation, transformer connections, information to be given on the rating plate of a machine, wire and cable standards, rating and testing of switches and other circuit-control apparatus, electric railway standards. The appendices deal with (1) railway motors; (2) illumination and photometry, and (3) the bibliography of literature relating to Electrical engineering standardization. An index of the rules is given.

930—Public Relations.

CORPORATION POLICY AND PUBLIC SENTIMENT. Editorial, *Electrical Review*, August 15, 1914, p. 307.

Attention is called to the fact that, while municipal operation of utilities is usually not as efficient or as economical as private operation, voters often seem willing to make some financial sacrifice for the sake of eliminating a utility corporation. The causes underlying anti-corporation sentiment are considered. It is said that the corporation policies of the past which have been responsible for such feeling are now happily being discarded and the modern policy and attitude of utility corporations is entirely different. There is less inclination to participate in politics, although in some communities where corporations are subject to blackmail by unscrupulous politicians it is not possible to keep out. In most communities, however, the attitude of straight-forward dealing with the public has been adopted, and where a franchise is to be renewed methods which were adopted in 1906 would not be thought of today. In the fight for a franchise in Toledo, Henry L. Doherty is showing the world a fine example in meeting criticism face to face and gaining the popular suffrage through sheer might of logic and appeal to reasoning power.

112—Franchises.

THE KANSAS CITY STREET RAILWAY FRANCHISE. *Engineering News*, 1 page, August 13, 1914, p. 346.

A concise summary of the provisions of the franchise is given, and the criticisms directed against it enumerated.

910—Promotion and Growth of the Business.

EXTENSION OF ELECTRIC SERVICE INTO SMALL COUNTRY COMMUNITIES AND RURAL DISTRICTS, by M. C. OSBORN. To be Read before the Northwest Electric Light and Power Association, September 9-11, 1914.

The methods by which the Washington Water Power Company has established a paying business in the small country communities and rural districts around

Spokane, are described. Tables are given showing a comparison of the estimated yearly revenue in new towns before delivery of service with the yearly revenue after one year's service.

COURT DECISION REFERENCES.

129—Default in Public Service.

CITY OF WHEELING V. NATURAL GAS COMPANY OF WEST VIRGINIA. Decision of the SUPREME COURT OF APPEALS OF WEST VIRGINIA. May 12, 1914. Rehearing Denied, July 1, 1914. 82 Southeastern 345.

This case was referred to in 5 RATE RESEARCH 238. It is now available in the Southeastern Reporter, as above noted.

381—City Taxation.

MILLVILLE WATER CO. V. CITY OF MILLVILLE. Decision of the SUPREME COURT OF NEW JERSEY. June 23, 1914. 90 Atlantic 1097.

In 1897 the City of Millville agreed with the Millville Water Company that, if the company would erect a plant to supply the city with water, the city would take such supply, and would annually, in compensation therefor, exempt the water company "from the payment of all taxes except those levied for state and county purposes." In 1912, in violation of this agreement, the city having received its water supply, compelled the water company to pay the tax due to the city for that year. Thereupon the water company sued the city for the price of the water so furnished, fixing in its complaint such price as the amount of the tax so paid.

The main ground urged by the defendant's counsel for striking out this complaint is that the agreement of the city to exempt the plaintiff from the payment of taxes that might be due to the city was ultra vires, against public policy and void.

If the parties to this contract be looked upon only as a taxing power and a taxpayer, there is much force in this contention. Such, however, is not the attitude of the parties to this contract, and was not in 1879, when the city entered into it to induce a newly formed water company to erect a plant and to do all things necessary to supply the city with water.

Having succeeded in this object, and having, for 35 years, enjoyed the performance of this agreement on the part of the plaintiff, the defendant ought not now to be allowed to put a construction on its contract that will defeat its true intent if any other construction is at once consistent with the meaning of the words employed and the obvious intent that the parties had in mind. We think that there is such a construction.

138—Contracts.

UNITED FUEL GAS CO. V. WEST VIRGINIA PAVING AND PRESSED BRICK CO. Decision of the SUPREME COURT OF APPEALS OF WEST VIRGINIA. June 16, 1914. 82 Southeastern 329.

A consumer, who had contracted to take his entire supply of natural gas from the company for a period of three years, in the middle of the term began to purchase from another company. The gas company sought an injunction to restrain the purchase of gas from the second company during the life of the contract. The court affirms a previous decree in favor of the brick company, holding that:

There is no occasion for numerous suits. On the refusal of defendant to take plaintiff's gas, it had a right to treat the contract as at an end, and to sue and recover entire damages in one action.

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No. 22

RATE RESEARCH



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Rate Research

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Vol. 5

CHICAGO, AUGUST 26, 1914

No. 22

For statement of facts and opinions contained in papers abstracted herein, the Association does not hold itself responsible

RATES

IPSWICH, ENGLAND

614—Heating and Cooking.

IPSWICH (ENGLAND) CORPORATION ELECTRIC SUPPLY has adopted a new tariff for residences which it terms the "Rateable Value" tariff for the purpose of encouraging the more general adoption and use of electricity for domestic purposes in private residences, among which uses are: lighting, heating, cooking, ventilating, light baths, ironing, knife cleaning, driving sewing machines, etc. The "Rateable value" tariff consists of a fixed annual charge, equal to $12\frac{1}{2}\%$ on the net annual rateable value of the premises, payable in four equal quarterly instalments, in addition to which all electricity consumed is charged for at $\frac{1}{2}$ d. (1 cent) per unit net, no matter for what purpose it may be used. The rental of the meter is included in the fixed charge. Further explanation of this rate is taken from the printed pamphlet issued by the company.

"To illustrate the advantages of this method of charging, an example is given of a residence the net assessment of which for rating purposes (rateable value) is £36 (\$174.96) per annum. The present annual consumption for lighting purposes is 330 and a further 400 units are used for heating.

ON THE PRESENT FLAT RATE TARIFF:

	£	s.	d.	
330 units per annum for lighting at 4d. (c. 8 cents).....	5	10	0	(c. \$26.73)
400 units per annum for heating, etc., at 1d. (c. 2 cents)...	1	13	4	(c. \$ 8.10)
Meter rent on two meters.....	0	10	0	(c. \$ 2.43)
Total.....	£7	13	4	(c. \$37.26)

ON THE RATABLE "VALUE" TARIFF.

$12\frac{1}{2}\%$ on £36 (c. \$174.96) as fixed charge.....	£4	10	0	(c. \$21.87)
730 units at $\frac{1}{2}$ d. (c. 1 cent).....	1	10	5	(c. \$ 7.39)
Total.....	£6	0	5	(c. \$29.26)

"The more use that is made of electricity in any residence the greater the saving obtained by the use of 'Rateable Value' Tariff.

"It is entirely at the consumer's option whether he has his supply under the 'Rateable Value' Tariff or under the ordinary tariff, but if he intends making use of electricity for heating or cooking, it is

clearly to his advantage to adopt the former tariff. A condition is that the consumer adopting the 'Rateable Value' Tariff shall give an undertaking, which is embodied in the Agreement which he is required to sign, that he will remain on the tariff for 12 months from the date of transfer, or, in the case of a new consumer, from the date of commencing to take a supply.

"The Rateable Value shall be taken as that existing at the time when the consumer's application is received, but this figure shall be subject to adjustment to correspond with any alteration made in the assessment of the premises by the rating authorities.

"The 'Rateable Value' Tariff supersedes the 'Contract' Tariff hitherto in force."

COMMISSION DECISIONS

OREGON

132—Protection from Competition.

Complaint v. OREGON POWER COMPANY, Alleging that Discriminations are Practiced to Secure Business in Competition with the Municipal Plant. Decision of the OREGON RAILROAD COMMISSION, Attempting to Eliminate Unfair Competition. June 6, 1914.

The complainants who constitute the Water Board of the City of Eugene allege that the Oregon Power Company, furnishing electric service in active competition with the municipal plant, has resorted to discriminatory practices in deviating from their published schedule and offering special inducements in order to obtain customers.

129.1—Discrimination.

"It appears, for instance, that defendant has loaned electric flat irons to customers, present or prospective, who will agree to use the same, under a written agreement to return them to the defendant when the use ceases. The Commission finds that such practice, open generally to the public, does not constitute an unjust discrimination. Such practice, however, comes within the rules of the Commission relative to the filing of rate schedules, and such practice is held to be a regulation that affects the rates charged for service, and consequently should be included in the schedules filed with the Commission pursuant to its rules. The evidence does not substantiate the complaint of other deviations from the published schedules of the defendant."

132—Protection from Competition.

In answer, defendant, after setting up the keen competition which exists between itself and the municipal lighting and power plant of the city of Eugene, alleges that the city of Eugene has used methods of competition which are unjust and that defendant has suffered irreparable injury because it is bound to adhere to its schedules on file with the Commission, while the municipally owned utility is under no such restrictions, and is permitted to and does deviate from its schedule at

will. The defendant requested the temporary suspension of its rate schedules as provided by Section 71 of Chapter 279 of the General Laws of 1911, to permit it to compete on terms of equality with the municipally owned utility operated and controlled by the plaintiffs. . . .

The Commission issued an order stating that if the city adopts rates and definite rules covering instances in which irregular practices have obtained in the past,

“ . . . the application of the defendant for leave to deviate from its tariffs will be denied; if such suggested regulations shall not be so adopted by the plaintiffs and the city of Eugene, the Commission retains jurisdiction herein for the purpose of making an appropriate order relieving the defendant from the necessity of adhering to its tariffs as to such business. . . .

“The order of dismissal is without prejudice to the right of the defendant again to present an application for relief, if in the future it shall be made to appear that the plaintiffs are not adhering to their existing schedules, or are engaging in any other respect in unfair competition with the defendant. . . .”

PENNSYLVANIA

132—Protection from Competition.

PENNSYLVANIA UTILITIES COMPANY VS. LEHIGH NAVIGATION ELECTRIC COMPANY, Asking that Respondent be Ordered to Desist from Providing a Duplicate Electric Service in Certain Territory Served by Petitioner. Decision of the PENNSYLVANIA PUBLIC SERVICE COMMISSION, Holding that such Order Cannot be Issued Under the Circumstances in This Case. July 9, 1914.

“The question which is raised by the averments of the petition and the answer in the nature of a demurrer, may be stated as follows: Has the Commission authority to prevent a corporation which is a public service company incorporated before the passage of the Act of July 26, 1913, but which has not begun the exercise of its rights, from entering upon the territory prescribed by its charter because of the fact that this territory is already occupied by another public service company rendering adequate service?

“It is plain that if this question be answered in the affirmative, and the authority so conferred be exercised by the Commission, the result is a complete nullification of the charter of the respondent. If an electric light company cannot enter upon the territory in which it has been granted power by the legislature to exercise its franchises and privileges, it can do nothing. It is frankly conceded that there is no specific grant of such authority to the Commission to be found in the language of the Act. Since the Act went into effect, public service companies can only be incorporated, upon the determination of the Commission, that the approval of the application is ‘necessary or proper for the service, accommodation, convenience or safety of the

public.' When a public service company, acting within the rights granted by its charter, undertakes to make a contract with a municipality, the subject matter of the contract is still within the control of the Commission. The Act provides that 'No contract or agreement between any public service company and any municipal corporation shall be valid unless approved by the Commission.' This provision seems plainly to apply, no matter at what time the public service company may have been incorporated, but there is no provision of the Act which goes so far as to empower the Commission in specific language, to exclude a public service company incorporated prior to the going into effect of the Act, from entering upon the territory to which its franchises apply. It may want to supply individuals within that territory. It may with the consent of the Commission, supply municipalities there. There is, on the other hand, a specific provision bearing upon the subject which seems to deny such authority. Section 12 of Article III provides:

'Every Public Service Company shall be entitled to the full enjoyment and exercise of all and every, the rights, powers and privileges, which it lawfully possesses or might possess at the time of the passage of this Act, except as herein otherwise expressly provided.' "

"It was argued, however, with much vigor, that Section 2 of Article III does give necessary authority. This section provides as follows:

'Upon the approval of the Commission, evidenced by its Certificate of Public Convenience first had and obtained and not otherwise, it shall be lawful for any proposed public service company—(a) To be incorporated, organized or created, * * * ; (b) To begin the exercise of any right, power, franchise or privilege, under any ordinance, municipal contract or otherwise.'

"The contention is that since the respondent had only been chartered and had not begun to exercise any of its powers before the Act went into effect, it is not now entitled to begin such exercise without the approval and certificate of the Commission. To give such a construction to the paragraph would be to bring it into conflict with Section 12 of the same article heretofore cited. The whole Act must be considered and such part of it be given its due weight, in order that a consistent construction be reached. If it be at all possible, from the language used. It is entirely possible to give full weight to the words of this paragraph without being compelled to reach the conclusion contended for by the complainant.

"Under Section I of Article I of the Act, public service companies consist of two classes, i. e., corporation and 'all persons engaged for profit in the same kind of business.'

"Paragraph 'a' of the section under consideration applies only to the incorporation, organization and creation of chartered companies. It therefore became necessary to add a paragraph to cover the other class of public service companies, consisting of persons engaged for profit in the same kind of business. This appears to have been the purpose of paragraph 'b.' Such an interpretation harmonizes all of the related

sections of the Act, and is strengthened by the use of the word 'proposed.' This descriptive word cannot be applied to a corporation in existence with all of its powers and franchises before the passage of the Act. It fits exactly the case of a combination of persons, or an individual intending to engage for profit in that kind of business, but who do not become a public service company until they begin the exercise of the rights conferred upon them."

The Commission concludes that it does not have the authority to prevent the respondent from entering upon the territory described in its charter. The complaint is dismissed.

WISCONSIN

580—Terms and Conditions.

Petition of the CITY OF MANITOWOC as a Water and Light Utility for Authority to Alter Rates. Decision of the WISCONSIN RAILROAD COMMISSION, Approving the Proposed Changes. June 30, 1914.

The Commission approved a minimum charge provision for the electrical department, and a rule regarding charges for connecting electric meters submitted by the applicant as follows:

"Upon the cessation of electric service at any one place used in whole or part for business purposes the final bill for service there shall include a charge of \$1.00 for installing the meter there, provided that in case the total of all charges for electric consumption there since the beginning of such service shall have been more than \$2.00, then only such part of \$1.00 as shall make such total \$3.00 shall be included in said bill."

This rule is to be put in effect in order to give the utility a reasonable degree of protection against losses from temporary consumers.

COURT DECISIONS

IDAHO

132—Protection from Competition.

IDAHO POWER AND LIGHT CO. v. BLOMQUIST. Suit to Set Aside Decisions of the Idaho Public Utilities Commission Refusing to Permit the Company to Enter Certain Territory in Competition with Existing Companies. Decision of the IDAHO SUPREME COURT, Upholding the Commission's Decisions. June 27, 1914. 141 Pacific 1083.

The Idaho Power and Light Co. appealed from the Commission's decisions in the Great Shoshone and Twin Falls Water Power Co. case (See 4 RATE RESEARCH 391), and in the Beaver Dam Power Company case (See 4 RATE RESEARCH 393). The court's decision contains an exhaustive account of what has been done by the various states in the matter of

competition, quotes liberally from decisions of commissions and courts and miscellaneous authoritative publications, and gives a complete résumé of the provisions of the laws of the states on the point. The decision is especially interesting in view of the fact that the Republican and Democratic parties of the state have pledged themselves to amend the public utilities act to allow competition.

"By the public utility laws of the several states, attempts have been made on the part of their Legislatures to correct existing difficulties between public service corporations and the communities which they serve. The first general steps taken by the Legislatures were to provide for rate regulation in order that the consumer might be protected in cases where there was no competition. Competition at that time was looked upon as a regulator, and rate regulation was accepted as a protection to the public. Competition between public utility corporations led to rate wars, in which each company tried to get the advantage of or destroy the other, and usually resulted in the destruction of one of the competing corporations, or to a division of the territory between them, or to the consolidation of such corporations. Statutes to prevent such consolidations and to prevent the division of the territory have been enacted. Those regulating laws were differently viewed by different classes of people. Those who furnished the money for the construction of the utility system, represented by stockholders, bondholders, mortgagees, was one class; the consumer another; promoters another. The latter desired no regulation whatever, since it hampered their ability to sell prospective utilities. On the other hand, the people who furnished the money desired stability for their investment. It was the desire of the stockholder, bondholder, or mortgagee not to have his investment jeopardized, and it was the desire of the consumer to receive the services at a reasonable rate or compensation.

132.1—Natural Monopolies.

"Rate wars affected such investments, and either one company or the other finally had to go out of business, and experience shows that there can never be any *permanent* competition in matters of this kind.

132.2—Fair Rates and Efficient Service.

"Under these various utility acts, the commission is generally given power to regulate rates and fix a specific rate, instead of a mere maximum, and that took away the opportunity for rate cutting, one of the principal instruments of warfare between such corporations. Under the act in question, the commission is given power to fix the rate absolutely, and neither of the competing companies can charge more or less than the rate fixed. Under those conditions competition can amount to nothing, and the only reason for having two corporations covering the same field is to secure satisfactory service. But, under our utilities act, the commission is the arbitrator in regard to all matters of service. If the utility

corporation is not giving satisfactory service, the commission has absolute power to compel it to do so. If its facilities are such that the cost of operation is unnecessarily high, the commission can enforce the installation of proper machinery and facilities and a correspondingly proper charge for the commodity furnished. The commission may force the public utility to keep abreast of the times in the employment of proper machinery and appliances in their plants and in the economic conduct of its business. If wasteful methods are indulged in, the public utility must bear the loss, and not the consumer. Thus the reason for competition is entirely taken away. The rate to be determined by the commission is each case is a reasonable rate—a rate fair to both the consumer and the supplier. If there are other methods or machinery that might be used in a plant that would materially reduce the cost of production, the commission may direct the utility to install such machinery or appliances, and in case it refuses to do so, upon proper application, may issue a certificate of convenience and necessity to a utility corporation that will do so. A power company already occupying a field may be giving service to many localities where it cannot charge sufficient to obtain a profitable return. Another corporation might thereafter construct its plant and lines into the profitable markets of such company and thus compete for the most desirable business. In this way it might take the cream of the business at the very least expense, and cripple the company that was furnishing the commodity to the more extensive field.

132.8—Unnecessary Duplication.

“There is another question that affects the public in such cases: An existing utility has already expended, say, \$1,000,000 in the power plant and transmission lines and distribution system in a town. Another utility, coming in must also provide a power plant and transmission lines and a distribution system. If there is to be unrestricted competition, then the later distribution system must cover the same area as that of the older one. If it costs the same money, then there is an additional \$1,000,000 expended in a town where a \$1,000,000 system would be amply sufficient. There would be two sets of poles and transmission wires in the streets, the construction and keeping in repair of which would necessarily interfere with and obstruct the free use of the streets by the people more than one set of poles and wires; and two sets of electrical wires in a city would necessarily increase the danger to the lives and limbs of the people, and thus interfere with the peace, health, and welfare of the community. In such a case, when a commission comes to fix rates, it will be confronted with this situation: It finds the town provided with duplicate plants; each company is entitled to have a rate fixed so as to give a return upon its bona fide investment; therefore the rates paid by the people must be upon \$2,000,000 instead of upon \$1,000,000, and the amount of money collected by the utilities, if they are to be given a fair return on their investments, must be much more on the two investments than it would upon the one. And

the total amount paid by the consumers must be more than it need be if there were only one investment and one system. It is for the benefit of the public that the highest efficiency be obtained from a public utility and that it serve the public at the lowest cost, and such an end cannot be reached if the community is served by duplicate plants. Where a \$1,000,000 plant is amply sufficient a duplication of such plant is a waste of resources and an extra tax on the people.

132—Protection from Competition.

“The state having taken away the rights of such corporations to fix their own rates, and having assumed supervisory power over the service in every material particular, it ought to provide some sort of a safeguard for those who furnish the money to construct the system, and the state has attempted to meet this situation by providing that the utility already in the field shall have that field unless public necessity and convenience require an additional utility and as to whether the public convenience and necessity require an additional utility is an administrative matter, left with the commission to ascertain and determine under supervisory power of the court. Any erroneous action on the part of the commission in that regard may be corrected by the court. . . .

“The general impression has been that competition was supposed to be a legitimate and proper means of protecting the interests of the public and promoting the general welfare of the people in respect to service by public utility corporations; but history and experience has clearly demonstrated that public convenience and the necessities of the community do not require the construction and maintenance of several plants or systems of the same character to supply a city or the same locality, but that public convenience and necessity require only the maintenance of a sufficient number of such instrumentalities to meet the public demands.

“Those provisions were intended to prevent monopoly, and cutthroat competition, which can only result in monopoly. Past history shows that unregulated competition is a tool of unregulated monopoly as the word “monopoly” is usually understood. . . .

“Under this law it must therefore be conceded that competition with its disastrous effects is no longer needed to protect the public against unreasonable rates; hence there is no longer any justification whatever for competition or the duplication of utility plants under the pretences of preventing monopoly. . . .

132.2—Fair Rates and Efficient Service.

“Some will no doubt become incensed by the action of the public utilities commission when it refuses to permit a utility corporation to duplicate an amply sufficient plant to supply the needs of the community, because they think they may receive services at a little

less rate; but they overlook the fact that under said public utilities act the commission may fix rates, and neither company can furnish light and power at a less rate. The public utilities commission has ample authority to fix just and equitable rates, both to the people and to the corporation; that is made a part of its duty, and the consumer cannot insist on a less rate than would realize the corporation a fair return on its legitimate investment and sufficient to pay for the upkeep of the plant or system, and the legitimate expense necessarily connected with the operation of such system.

132—Protection from Competition.

“The cry ‘monopoly’ by promoters and agitators will not be given much weight by thinking people, when they come to study the question of public utilities carefully and to thoroughly consider from various viewpoints the welfare and financial interests of those who furnish the money for the construction of utility plants and those who are in need of and demand the products or services of such plants for their comfort or prosperity. Those who furnish the money should be given a reasonable interest thereon; the corporation should be allowed sufficient to keep the plant in good repair so as to give the patrons good service; the people who do the work should be paid a reasonable wage; the consumer should receive the product or service at a reasonable compensation or rate. The interests of these four classes are entitled to fair and just consideration. It is conceded at the present time by the leading thinkers of the country upon this subject that the best method of arriving at a reasonable rate to be charged for such services can be better established by a public utility commission than by competition, especially that competition which must culminate in unregulated monopoly. If monopoly is to be regulated, it ought to be regulated in a way that equal justice may be done to all. The consensus of opinion at the present time clearly is that that object or purpose can be best achieved by public utilities laws similar to the one under consideration.

“The public mind has been so long impregnated with the idea that competition is the only relief against oppressive monopoly, it is difficult for the people to understand, without some thought and study, that such oppressive monopoly may be removed by fair and just regulation, and where a utility corporation has had no competition in a city or town, and a duplicate plant is proposed for serving the same city or town, and by its promoters better rates are offered, it is but natural for the people to want the reduced rates, and to encourage the erection of a duplicate plant. But experience shows that such duplication must be paid for by the community. But if a public utilities commission can establish reasonable rates, both for the corporation and the users of its product, it will in the end be better for all concerned than cutthroat competition. . . .

“It is provided in section 48a that no electrical corporation, etc., shall ‘henceforth’ begin the construction of an electrical plant, etc. It was not intended that a public utility corporation should slip in

between the passage and approval of said act and its going into effect and procure rights that would deprive the state of the right to regulate it in its operations and in making it amenable to the police regulation of the state, especially where it had not begun 'actual construction work and is prosecuting such work in good faith and uninterruptedly and with reasonable diligence in proportion to the magnitude of the undertaking', as provided by section 48b of said act. Under the facts of this case it clearly appears that the plaintiff had not begun actual construction work on its systems within either of said cities."

REFERENCES

RATES

614—Heating and Cooking.

COST OF ELECTRIC COOKING. *Journal of Electricity, Power and Gas*, $\frac{1}{4}$ page, August 15, 1914, p. 155.

A table is given showing the results of tests on the cost of cooking for an average family of five persons with current at three cents per kilowatt-hour. The figures are taken from a paper read before the recent meeting of the Canadian Electrical Association, by H. S. Brown.

720—Rate Schedules.

TUCUMAN (ARGENTINA), A GROWING INTERIOR CAPITAL. *Daily Consular and Trade Reports*, 4 pages, August 20, 1914, p. 979.

A brief discussion of the city's electricity supply is given. Rates charged by two of the three electric light and power plants—The Hidro-Elctrica de Tucuman and La Elctrica del Norte—are as follows:

LIGHTING

10.6 cents per kilowatt-hour for the first	50 kilowatt-hours' use per month.
8.5 cents per kilowatt-hour for the next	50 kilowatt-hours' use per month.
6.4 cents per kilowatt-hour for the next	100 kilowatt-hours' use per month.
5.1 cents per kilowatt-hour for the remaining	kilowatt-hours' use per month.

POWER

6.4 cents per kilowatt-hour for the first	100 kilowatt-hours' use per month.
5.1 cents per kilowatt-hour for the next	100 kilowatt-hours' use per month.
4.2 cents per kilowatt-hour for the next	200 kilowatt-hours' use per month.
3.4 cents per kilowatt-hour for the remaining	kilowatt-hours' use per month.

621.1—Load Factor.

APPARENT POWER PARADOX IN MAKING ICE-CREAM BY ELECTRICITY. *Electrical World*, $\frac{2}{3}$ page, August 22, 1914, p. 380.

The Central Illinois Public Service Company found that as an ice-cream factory approached its rated output the specific cost of production actually increased instead of decreased. Curves were plotted showing the energy input and factory

production for twelve months, and the specific energy production for twelve months. Here it was revealed that the kilowatt-hours per gallon of ice-cream were less in May than in June, July or August, even though the production was much greater in each of the latter three months. The explanation of this apparent paradox, however, was found to lie in the fact that during the month of May it was unnecessary to drive the large refrigerating machine at its full rating, while in the hotter months all of the available refrigeration was needed and the 20 h. p. motor worked at full load.

500—Rate Practice.

RATES FOR ELECTRICITY IN DIFFERENT COUNTRIES, by G. SIEGEL. *Electrical World*, $\frac{1}{4}$ page, August 22, 1914, p. 387.

The conclusion of this article, which was referred to in 5 RATE RESEARCH 330, is abstracted. It is said that in Holland the simple meter rate is prevalent. The usual charges per kilowatt hour are 8.5 and 10.5 cents for lighting and 4 and 6 cents for motor service. Discounts are often allowed. In the summer resort Zandvort temporary residents have to pay 25 cents per kilowatt-hour for lighting and the inhabitants 10.5 cents. In England the flat rate is rarely used, but meter rates are employed with greatly varying modifications. Both the Wright tariff and the telephone system are based on the principle that the fixed charges should be primarily considered in the development of the rate schedules. In Sweden, though water-powers are used to a large extent, flat rates are rarely offered. The usual system is a simple meter scale without much complication. The article closes with a brief review of the different tariffs in use in the United States.

INVESTMENT AND RETURN

300—Investment and Return.

PACIFIC GAS AND ELECTRIC COMPANY, Plaintiff, vs. CITY AND COUNTY OF SAN FRANCISCO, Defendant. In the DISTRICT COURT OF THE UNITED STATES, NORTHERN DISTRICT OF CALIFORNIA, SECOND DIVISION. REPORT OF STANDING MASTER ON MOTION FOR PRELIMINARY INJUNCTION. Filed July 20, 1914. 126 pages.

This is the report of Honorable H. M. Wright, Standing Master in Chancery in the United States District Court in the case, now pending, in which the company is seeking to restrain the enforcement of an ordinance fixing seventy-five cents as the maximum rate for gas.

The master in his draft report computed that a rate of 75 cents would return 6 per cent on the investment, and hence concluded that the injunction should be denied. The company, in the objections which it filed the draft report, showed that due to a serious error in the master's computations, the suggested rate would show only a 5 per cent return. The master filed a supplemental report, holding that the ordinance will be found to be unconstitutional and void, and concluded that the injunction should be granted.

There is much discussion of Mr. Hockenbeamer's affidavit on the cost of money to California Utilities (see 5 RATE RESEARCH 137). In discussing rate of return, the master holds that "the court should be careful neither in the particular case to seem to attempt to fix a rate, nor under general principles, to decide any matter in advance of the necessity therefor; and that the question of minimum reasonable return should be left open."

300—Investment and Return.

THOMAS MONAHAN, AS MAYOR OF THE CITY OF SAN JOSE, COMPLAINANT, VS. PACIFIC GAS AND ELECTRIC CO., DEFENDANT. Before the RAILROAD COMMISSION OF THE STATE OF CALIFORNIA. Argument on Behalf of Defendant. Filed August 5, 1914.

This is the company's brief in the San Jose rate case, in which the city alleges that the company's rates for electricity are excessive and unreasonable, that the minimum charge of \$1.00 is unfair and unreasonable, and that the company has at various times refused to make extensions.

314.8—Deficit in Early Earnings.

THE EARLIEST RECORDED ESTIMATE OF THE "DEVELOPMENT COST" OF A RAILWAY. Editorial, *Engineering and Contracting*, August 19, 1914, p. 169.

Development cost, or the deficit in fair return that comes as a sequel to "interest during construction" has become a cost item of great importance to appraisers. There are still some engineers who seem to look upon this cost item as if it were a new discovery, because they themselves have not been in the habit of estimating it. Therefore it is of more than ordinary interest to find that 70 years ago a definite estimate was made of the probable development cost of a railway. Attention is called to a part of the history of the Northern Pacific Railroad wherein probable development cost, as estimated by Asa Whitney in 1845, is given.

MUNICIPALITIES

830—Public Ownership.

COMPLETE REPORTS ON MUNICIPALLY OWNED UTILITY PLANTS IN THE STATE OF OHIO. Investigation Made by Members of the Staff of the Public Service Publishing Company. June, July and August, 1914. Pamphlets, 31, 43 and 27 pages, pages 1 to 112.

Full reports on equipment, indebtedness, accounting, rates, etc., of the municipally owned utilities are given.

830—Public Ownership.

MUNICIPAL OWNERSHIP DEFEATED AT GUTHRIE. News Item, *Electrical Review*, August 22, 1914, p. 356.

Although reputedly in favor of municipal ownership, the city of Guthrie, Oklahoma, defeated at the polls on August 11 proposals to issue bonds not to exceed \$500,000 to buy the electric light and power plant, \$40,000 for water works, and to increase the tax levy to meet the bonds.

840—Public Operation.

COMMITTEE REPORT ON UNIFIED ELECTRICITY SUPPLY FOR LONDON. *Electrical Review*, $\frac{2}{3}$ page, August 22, 1914, p. 385.

The report of the committee of the London County Council, referred to in 5 RATE RESEARCH 334, is reviewed. It is pointed out that the committee's plan for private operation, is interesting in view of the fact that one of the favorite arguments of municipal ownership advocates in this country, has always been to cite the advantages which they say are secured under municipal ownership, control and operation of public utilities in Great Britain. In regard to the provisions of the new plan, the report of the committee is quoted as follows:

"It represents a combination of private and municipal enterprise designed to insure full control by, and an adequate share of profits to the public, with the flexibility and commercial enterprise due to corporate management. The

best features of both systems of working will thus, it is hoped, be secured. Moreover, under the arrangement contemplated it is hoped that the services will be secured in the working of the new undertaking of those who have had wide experience in the electrical industry and the peculiar conditions existing in the area to be dealt with."

GENERAL

950—Progress in the Act.

HYDROELECTRIC DEVELOPMENT IN GERMANY. *Daily Consular and Trade Reports*, 2½ pages, August 17, 1914, p. 913.

Data concerning important German hydroelectric plants are given. There is a statement of the rates charged by the Kraftübertragungs-Werke Rheinfelden, A.-G., constructed jointly by the Swiss and Germans at Wyhlen, near Basel.

112—Franchises.

KANSAS CITY FRANCHISE, by DELOS F. WILCOX. *Electric Railway Journal*, 1 page, August 22, 1914, p. 348.

In this communication Mr. Wilcox replies to the criticisms of Mr. Kealy, referred to in 5 RATE RESEARCH 320.

COURT DECISION REFERENCES.

380—Taxation.

WILKES-BARRE & W. V. TRACTION COMPANY v. DAVIS. Decision of the DISTRICT COURT, M. D. PENNSYLVANIA. June 3, 1914. 214 Federal 511.

A street railroad company leased at a graded annual rental its system of street railways, to another company for a long term, and thereafter engaged in no other business than to maintain and preserve its corporate existence, receiving the rent, and distributing the income among its stockholders. The court holds that it was no longer "doing business" as a traction company, and was therefore not subject to franchise taxation, under Act August 5, 1909 c. 6, 36 Stat. 112, §38 (U. S. Comp. St. Supp. 1911, p. 946) which is only applicable to corporations doing business in a corporate capacity as authorized.

129—Default in Public Service.

MURRAY v. CITY OF POCATELLO. Decision of the CIRCUIT COURT OF APPEALS, NINTH CIRCUIT. May 11, 1914. 214 Federal 214.

The decision of the District Court, Eastern District of Idaho, in this case, was abstracted in 4 RATE RESEARCH 28. The Circuit Court affirms the decision of the lower court, holding that the ordinance required the appellant to bring in all the waters of Mink creek as well as to make the specified extensions, for which he received consideration in the concessions made by the city, and that, on the facts shown, the city was entitled to a decree annulling the ordinance.

115—Use of Public Highways.

THROPP et al v. PUBLIC SERVICE ELECTRIC COMPANY. Decision of the COURT OF CHANCERY OF NEW JERSEY. July 7, 1914. 91 Atlantic 318.

An abutting property owner sought to enjoin the company from erecting poles on its land claiming that the poles on his property, even for public lighting purposes, are an unlawful invasion of his property rights. It is held that the company

is justified because it is under contract with the township to furnish electric street lighting, but that the company's use of poles much larger and higher than was necessary for the purpose, in order to carry a high-tension transmission system intended for the sale of electricity to private consumers, was unlawful, and subject to injunction.

112—Franchises.

MAYOR AND COUNCIL OF CITY OF HAGERSTOWN V. HAGERSTOWN RY. CO. OF WASHINGTON COUNTY. Decision of the COURT OF APPEALS OF MARYLAND. March 31, 1914. 91 Atlantic 170.

The city, having granted the company, the right to use the streets for poles and wires to supply the city with light, and having taken electricity for a number of years for street lighting eventually built a municipal plant. It attempted to oust the company from the streets, on the ground that the ordinance is void. The court holds that, since the city had entered into a contract with the company for street lighting, and had allowed the company to expend large sums in improving its service, it was estopped from claiming that the company operated without its consent.

"After the appellee has used the streets of the city, under the circumstances and for the purposes stated, for more than 14 years, it would be most inequitable to permit the city to assert that it did not give its consent to such use of the streets. To compel the appellee to remove its poles and to abandon the business which it has established at much cost, and which the city encouraged and regulated, would impose a great hardship upon the appellee. Such demands cannot appeal to a court of equity, and upon no principle of right and justice can the relief prayed in this case be granted."

224—Rate Regulation.

BOROUGH OF BELLEVUE et al v. OHIO VALLEY WATER COMPANY. Decision of the SUPREME COURT OF PENNSYLVANIA. April 20, 1914. 91 Atlantic 36.

A contract had been entered into between the borough of Bellevue and the water company which fixed the rates to be charged for the use of water. Subsequently the water company increased its rates, and the borough and certain citizens filed a bill restraining the water company from enforcing its new rates. The Court refused the injunction.

"If the case in any of its aspects involves the reasonableness or unreasonableness of water rates, it is a sufficient answer to say that the section of the act of April 29, 1874 (P. L. 73), which gave courts the power to determine questions of this character, was repealed by the Public Service Company Law, approved July 26, 1913 (P. L. 1374). In other words, the legislature took this power away from the courts and conferred it upon the Public Service Commission. Hereafter, so long as the act of 1913 remains in force, the question of the reasonableness of rates established by public service corporations must, in the first instance, be submitted to the Public Service Commission when challenged.

"It [the contract between the borough and the company] is not a continuing binding contract enforceable through a court of equity. This is so, not because the courts have any desire to avoid the performance of duties cast upon them by the law, but because the people, speaking through the Legislature, have declared that these duties shall be performed by a special tribunal created for the purpose. The disposition everywhere is to commit questions relating to the regulation, and to the rates of public service corporations, to the supervisory powers of special tribunals, and concededly matters of this character are within the domain of legislative action."

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Rate Research

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Rate Research

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CHICAGO, SEPTEMBER 2, 1914

No. 23

For statement of facts and opinions contained in papers abstracted herein, the Association does not hold itself responsible

COMMISSION DECISIONS

NEW JERSEY

112.5—Ordinance Rates.

CITY OF PLAINFIELD V. PUBLIC SERVICE ELECTRIC COMPANY. Regarding Enforcement of Contract, Requiring Free Lighting of Public Building; Decision of the NEW JERSEY BOARD OF PUBLIC UTILITY COMMISSIONERS, Ordering the Company to Comply with the Terms of the Contract. April 1, 1914.

The Company notified the City of Plainfield that it

“is convinced that it cannot longer continue to lawfully furnish free lighting to the municipal buildings in the City of Plainfield, and unless a contract for that purpose is made before the first of February next, the Company will be constrained to discontinue the lighting of such buildings at that time.”

“In this posture of affairs the City petitioned this Board . . . to make an order requiring the respondent to comply with the terms of the ordinance and the covenants of the agreement as set forth above, and in conformity therewith to continue to light, without charge, the municipal buildings of Plainfield.” . . .

220—General Powers of Commissions.

“The petitioners rest their request for such an ordinance upon Chapter 195 of the Laws of 1911 (II, 17, (a)). This provides that the Board shall have power, after hearing, by order in writing, to require every public utility

“(a) ‘To comply with the laws of this State and any municipal ordinance relating thereto, and to conform to the duties imposed upon it thereby, or by the provisions of its own charter, whether obtained under any general or special law of this State. . . .’

“The Board is clearly of opinion that the section of the statute cited warrants the Board to order a public utility to comply with the laws of this State which relate to the utility by reason of the utility’s specific character as a duly delegated agent of the State for affording service, safe, adequate and proper, at reasonable rates, and without undue or unjust discrimination.

“But it is a hazardous pressing of the language of the statute which would make it imply that this Board may order a public utility to

make a payment of money lawfully due to a contractor for work done, or to comply with a contract which differs in no way from a contract assumed by private parties.

"The enforcement of obligations such as that just instanced of a public utility, it was clearly never intended to impose upon an administrative board, or to withdraw even in the first instance from the jurisdiction of the courts.

"If the obligation of the respondent to light without charge the public buildings of Plainfield as a continuous payment for respondent's right of entry upon and occupancy of streets of Plainfield, said rights being obtained when its franchise from Plainfield was bargained for, were one flowing wholly from a contract that in its nature is entirely akin to a contract between two private individuals it would be an obligation not intended for this Board's cognizance or enforcement under the statute.

"But this Board is not persuaded that the contractual obligation of the respondent to light the city buildings free of charge is one arising from a contract such as might be concluded by the respondent in a quasi-private capacity. The passage and acceptance of the ordinance approved July 12th, 1898, created certain contractual rights and obligations, such as the designation of streets on which the franchise's distributing apparatus may be placed, are described in the ordinance. But the rights and obligations created by the passage and acceptance of the ordinance are not set forth in their entirety in the ordinance, but are defined in the subsequent agreement. This fact is attested by the preamble of the agreement of November 28th, 1898, wherein it is explicitly stated that:

" 'It was understood and agreed *before the passage of the said ordinance, and in consideration thereof*, that the said Plainfield Gas and Electric Light Company should enter into this contract for the benefit of the said inhabitants of the City of Plainfield and all persons residing therein.'

"Hence the omission of the ordinance to recite each and all of these contractual rights and obligations *in extenso* does not operate to deprive the rights and obligations subsequently set forth in the agreement, of the binding force imparted to them by the passage and acceptance of the ordinance. By necessary implications the rights and obligations recited in the agreement become part and parcel of the contract created by the passage and acceptance of the ordinance, although their reduction to writing was subsequent to the approval of the ordinance. Being a necessary and pre-destined complement to the contractual rights and obligations named preliminarily in the ordinance, this Board has no alternative but to regard them to all intents and purposes as part of the contract effected by the passage and acceptance of the ordinance, and as entitled under the statute of the same enforcement as though the original ordinance had set them all forth at length."

129.1—Discrimination.

The respondent urged that to furnish the free service would be unjust discrimination which is forbidden in the Public Utilities Act.

"The Board is of the opinion that this contention is groundless. Undue or unjust discrimination was forbidden at the common law prior to the enactment of Chapter 195, Laws of 1911. If such rights which municipalities have obtained by contract whether incorporated in ordinances or not, when bargaining in respect of franchise grants, are void now; they have long been void hitherto. That such rights have been upheld in many adjudications precludes the assumption that they were void or have become void. Such a position may readily prove a double-edged tool for public utilities. If the covenants under which they obtained rights of entry always were void, the franchises in question are, many of them, in a parlous state. The utilities are not entitled to the rights they have obtained by such contracts, unless they honor the valid considerations required of them by virtue of such contracts.

"The Board is of the opinion that when a public utility bargains with a municipality for rights of entry upon and occupancy of the public street, the public utility acts in a unique capacity; that in such unique capacity it may assume obligations to make a return for such franchise privileges as it seeks, and may express such obligations in terms of money, or of service. It may in such capacity lawfully undertake to pave the streets traversed by its cars. It may in such capacity undertake to pay to the municipality in money a certain portion of its receipts. It may in such capacity undertake to afford a stipulated amount of free service, such as free lighting or free telephone service for municipal buildings.

"The essential thing is that the obligation so undertaken, even though expressed in terms of service to be rendered without money payment, is one assumed by the public utility as a bargainer with a body politic, not as a duly deputized and enfranchised agency required to afford service to the generality of consumers without undue or unjust discrimination.

"It is one thing to promise service without charge when the utility bargains with a body politic for a franchise; it is a radically different thing for a utility duly enfranchised to sell service to the public generally. In the one case the utility buys particular privileges from a particular body politic; in the other case, the utility sells services to consumers generally. In the one case it buys franchise; in the other it sells a service.

"The Board, therefore, is clearly of opinion that for the respondent to light without charge the public buildings of the City of Plainfield does not involve undue or unjust discrimination, but that the respondent is bound to afford such lighting service without charge to the City of Plainfield.

"The alternative contention of the respondent that such lighting service without charge is a tax, and may be deducted by the respondent under the Voorhees' Act from the taxes paid to the municipality, is a matter not within the competence of this Board."

WISCONSIN

840—Public Operation.

Application of the RICHLAND CENTER ELECTRIC LIGHT AND WATER PLANT for Authority to Increase Rates. Decision of the WISCONSIN RAILROAD COMMISSION, Adjusting Rates, June 20, 1914.

The propriety of authorizing a municipal plant to charge consumers outside the city limits a higher rate than is charged residents of the municipality, first considered by this Commission in the Fort Atkinson case (3 RATE RESEARCH 294), is again discussed in this case. The decision says:

"The question relating to charge for current for lighting furnished to consumers outside of the city limits was discussed at some length in the hearing. The contention was made that the people outside of the city are customers who have no just complaint if they are charged a somewhat higher rate than the taxpayers in the city so long as the rate they are charged is a fair one as between them and the owners of the plant. The argument is a difficult one to meet. Municipal public utilities are established by reason of the desire of the inhabitants of a municipality to furnish for themselves the convenience and comforts of those public services offered. They are not generally entered into as an enterprise of gain to the city. Indeed, there might arise a troublesome legal question of power to so act if a city undertook any purely commercial business. But when a municipality establishes an electric light plant in order to supply its inhabitants with the conveniences arising therefrom common sense and good business allow that it should sell its surplus product if possible, rather than waste it. If to dispose of as much of its product as possible it ventures beyond the limits of the city, the residents in the region thus entered are in about the same position as would be theirs if they were dealing with an entirely private enterprise. In fact, as to those consumers the furnishing of current by the nearby city is virtually a private enterprise. It seems therefore, that so long as the rate charged them is fair they cannot complain of discrimination against them because they are charged a slightly higher rate than the residents of the city. Aside from this view of the situation there are certain reasons why it might be practicable for the city to afford service to persons living within its jurisdiction at a slightly lower rate than it furnishes service to outsiders. We need mention only the additional leverage it has in the matter of the collection of bills from householders on its tax rolls. The analysis of the position of the outside consumer given above seems sufficient, however, to make clear

the justice to both city and non-resident of a higher charge to non-resident consumers in certain cases, providing the difference in charges is not disproportionate to the elements which make such a difference proper. . . .

In this case the city is charging a rate of 10 cents per kilowatt-hour to residents and seeks to charge 11 cents per kilowatt-hour to non-residents. It appears to us that the rate sought to be established is proper, in view of all the circumstances.

NEVADA

300—Investment and Return.

Investigation of the NEVADA-CALIFORNIA POWER COMPANY to determine Reasonable Rates for Electric Light and Power. Decision of the NEVADA PUBLIC SERVICE COMMISSION, Fixing Rates, January 29, 1914.

The Commission on its own motion investigated the lighting and power rates of respondent's entire district in southern Nevada, comprising the towns of Tonopah, Goldfield, Rhyolite, Pioneer, Manhattan, Round Mountain, Millers, Blair and Silver Peak.

The territory served is chiefly a mining district and the company contends that its business is hazardous for the reason that the mining industry is fluctuating in character and of uncertain tenure.

With reference to the uncertainty of mining camps generally the principles laid down by the Commission in the case of the City of Ely v. Ely Light and Power Company may be fairly applied in this case. Speaking through Chief Commissioner Bartine, The Commission said:

"Too much weight should not be given to the claim that mining camps are short-lived, for the purpose of justifying what might appear to be excessive rates. When a public service corporation engages in business in such a locality, it takes no greater risks generally than most business men in the same place. It is sometimes said that there is a difference between a public service corporation and parties engaged in other lines of business in this; that the public service corporation is subject to regulation, while other callings are not. It is hard to say just how much weight should be attached to this distinction. While it is true that a merchant in a mining camp is not subject to regulation, it is equally true that he is subject to competition. On the other hand, while the public service corporation is subject to regulation, in small communities it is free from competition. In other words, as elsewhere herein stated, public service corporations are generally monopolies, having complete control of the business in their particular lines. . . . The principle does not seem to be entirely sound that a public service corporation engaging in business in a mining camp should be absolutely secured against loss, by being allowed to charge extraordinary high rates, while everyone else

engaged in business therein must accept such prices as he can get for what he has to sell. Putting it briefly, the public service corporation and the community which it serves must stand or fall together. So, that, while it may be proper to allow something additional to a public service corporation, in the way of charges because of the uncertainty of the life of a mining camp, we should also be exceedingly careful for the reasons above stated, not to attach undue weight to this consideration.' "

319.1—Water Power Rights.

The determination of a proper value of the company's water power rights was discussed at length. The company's claim and the method used by the company in arriving at this value is set forth. The difference between the amount actually expended in securing these rights, and the amount claimed by the company is termed the unearned increment value of water power right. The Commission states that this unearned increment value is analogous to intangible franchise value. A number of citations from the decisions of Commissioners and courts are given holding that franchise values should not be included in value for rate making purposes. In conclusion the decision says:

"The foregoing court rulings on the law of water appropriation and regulation in California, and covering specifically the question of water right value, seemingly precludes this Commission from allowing any unearned increment value to cover water rights appropriated under the laws of California.

"Moreover, after careful review of the laws covering the appropriation of water in both California and Nevada, we have reached the conclusion that the public should not be obliged to pay a return upon more than the bona fide investment value of a developed water right. This for the reason that the water right was originally a grant from the public without payment therefore or restriction on the freedom of its highest development and use, and also because the State has dedicated such property to beneficial public use.

314—Overhead Charges.

"Ordinarily the same necessity should not exist for as high a percentage in overhead factors when the 'original cost method' of valuation is used as when the 'reproduction (new) method' is used, or when an estimate is being made to cover the cost of new construction. This for the reason that, in applying the original cost method, the engineering and accounting records are closely followed and actual costs applied as nearly as may be, whereas, in making an estimate for new construction or to reproduce (new) property already constructed, the overhead expenses may be, and usually are to a considerable extent, unknown, and there is therefore latitude for a wider range in estimating the percentages which should apply. . . . Keeping in mind, however, that Nevada is, speaking generally, a higher cost country than other sections of the United States, and that the engineering and accounting records of many utilities prior to the creation of the

Public Service Commission were poorly audited, thus making it difficult and often impossible to report the actual costs, the Commission, actuated by a desire to be fair, will make an allowance of $17\frac{1}{2}$ per cent for overhead costs in all cases where they are not actually determined."

720—Rate Schedules.

The Commission issued an order reducing the Company's rates and eliminating certain inequalities. The rates prescribed by the Commission are meter rates varying with the quantity of current consumed.

WISCONSIN

132—Protection from Competition.

Application of the SEVASTOPOL FARMERS' TELEPHONE CO. to Furnish Telephone Service in Territory Already Served. Decision of the WISCONSIN RAILROAD COMMISSION, Denying the Application. June 2, 1914.

The applicant urged, as one of the reasons in favor of its entering the field, the fact that the service rendered by the two existing companies has not been satisfactory. After considering the evidence as to unsatisfactory service, the commission says:

"All of these matters, however, do not seem to present a justification for the establishment of a new telephone system paralleling and competing with the existing lines and inevitably depriving them of a large amount of their business. The public utility law provides an adequate way of obtaining good service just as it provides a remedy for excessive rates. The existing companies have not evidenced any intention to abandon the business in which they are engaged or shown by their attitude that they are indifferent to the quality of service they give, or are willing to let the public suffer indefinitely from poor service. These companies have shown a disposition to improve the quality of service and to take care of trouble when it arises. If this is not done promptly enough or with sufficient skill to make the attempted improvement effective, it is the duty of the companies to mend their ways and the duty of this Commission to see that the service is actually made adequate." . . .

A general investigation of service conditions will be made on motion of the Commission. If it should develop that for any reason adequate service cannot be had from the existing utilities, there might then be occasion for the entrance of a new company into the field.

"It is the opinion of the Commission that in a case like the present, where inadequate service is shown to exist, but no steps have been taken to secure the exercise of the Commission's powers for the correction of the inadequacy, the entrance of a new company into territory already occupied and fully covered by existing companies is ordinarily not required by public convenience and necessity. The impairment of existing investments must have better justification

than the existence of defects in service, which, for all that appears in the evidence, may be easily capable of correction when the proper steps have been taken." . . .

COURT DECISIONS

SOUTH CAROLINA

650—Discrimination.

PARIS MOUNTAIN WATER CO. v. CAMPERDOWN MILLS. Suit to Compel the Payment of a Contested Water Bill. Decision of the SUPREME COURT OF SOUTH CAROLINA, Holding that the Rates Specified in Franchise Must be Charged. July 20, 1914. 82 Southeastern 417.

Though the franchise of the company provided that it should not supply water to any customer per year for less than 15 cents per 1,000 gallons, where the supply exceeded 10,000 gallons per day, the company supplied various mills at a rate of 10 cents per 1,000 gallons. The Camperdown Mills, being compelled to pay the 15-cent rate, contended that the company was guilty of illegal discrimination, and that it should also receive the 10-cent rate. The court holds that the defendant cannot demand an illegal rate.

"The remedy where there has been an illegal discrimination in the administration of powers conferred by a municipality is not by extending to others the benefits arising from such discrimination, thereby increasing the number of those violating the law, but to resort to the remedies which the law provides for preventing the discrimination altogether. The defendant is practically asking the court to allow it to be placed in the same category as those mills that, it alleges, have entered into unlawful contracts, in order that it may receive benefits to which, it alleges, others in like plight are not entitled."

MISSOURI

224—Rate Regulation.

STATE ex rel MISSOURI SOUTHERN R. CO. v. PUBLIC SERVICE COMMISSION OF MISSOURI. Mandamus to Compel the Commission to Assume Jurisdiction in Company's Application for an Increase in Rates In Excess of Maximum Rates Fixed by Statute. Decision of the SUPREME COURT OF MISSOURI, Granting the Writ of Mandamus. July 2, 1914. 168 Southwestern 1156.

The company applied for an increase in rates over those fixed by statute of 1907.

"[The] commission, having taken time to consider, reached a conclusion and entered its order refusing to hear evidence. Accordingly it dismissed the complaint, giving as reason (whereby weighty matter hangs, to wit) that it had no power to allow or order an

increase in rates in excess of the maximum rates prescribed by statute. The order recites, *inter alia*, that in its (the commission's) judgment it is without authority to grant the relief prayed, and this (quoting) 'regardless of any evidence that may be submitted and (regardless of) the fact that complainant may show such rates, fares, and charges to be unjust, unreasonable, and confiscatory of its property.' . . .

"[The] record presents a single and clean-cut issue of law, to-wit: Does the public utilities act of 1913 give the commission power (if the facts ascertained on due hearing justify the exercise of it) to allow relator a freight and passenger rate in excess of that prescribed by elder statutes? If so, the absolute writ should issue. If not so, it should be denied. . . .

"We take it that a decent respect for the Legislature precludes the theory that the commission was given control of expenditures and denied control of income; the two being inseparable in the very nature of things. Moreover, it precludes the theory that the commission was given power to ascertain a just rate, and then (wonderful to relate) was denied power to enforce it; that prior legislation controlled the rate, while the commission controlled the outgo, thereby providing an upper and nether millstone with the corporation between. Therefore it follows that, if the hand of the Legislature by former acts was so laid on rates that no power existed to increase a hard and fast maximum general statutory rate (established to cover all cases and arrived at by legislative guess, however intelligent the guess may be, as seems to be the case at the time the utilities act was passed), the conclusion is irresistible that the Legislature intended its hand should be lifted, and that by general rules and methods prescribed for the guidance of the commission, as here, it was intended that it first ascertain the facts, and next should apply them in regulating rates, up or down. . . ."

REFERENCES

RATES

614—Heating and Cooking.

RATES FOR STREET LIGHTING AND RATES FOR COOKING, by R. S. HALE. Paper Read before the Sixth Annual Convention of the New England Section of the N. E. L. A. September 2-4, 1914. 10 pages.

The total amount to be charged for these classes of service, the method of charging, and the specific amount to be charged are considered. It is held that the total gross income must match up with the gross expenses, the latter including interest, dividends, depreciation, etc; and that the question of the total charges for all electric service should be kept separate from the question of the relative prices of the kinds of service. The methods advocated for street lighting are a fixed price per lamp where no change in the number of hours is expected during the life of the contract; and a fixed price per lamp plus a running charge per lamp hour, where there is a chance of a city's changing from a moon-light to all night schedule, etc. For cooking and heating, a straight kilowatt hour rate with wholesale blocks, is recommended. It is held to be desirable that the first block should

be the same as the lighting rate, so that there will be no temptation for a customer who wants only one kilowatt hour a month for a heating pad to ask for this rate. Of course a minimum will also prevent this, but minima are undesirable, and the same object can usually be obtained by having 10 or 20 kilowatt hours at same rate as lighting rate, with the balance at a lower rate or rates.

In discussing the question of what the specific rate shall be, the author points out the factors which must be taken into consideration—the fact that no customer will pay the central station more than he can get the service for otherwise, that the total of all the rates must not be more than enough to pay expenses and give a fair profit, all things considered, etc. In fixing cooking rates companies should keep on reducing the rates, until they can get the business, if they can make profit when they get it. They should experiment, and keep on cutting until they get to the point where any further cut would increase expenses more than the increase in income. It is the street lighting and the ordinary business on the maximum rate which are today least affected by competition. All other business, as power, cooking, etc., must be charged less than street lighting and commercial lighting in order to secure it, and should, therefore, be charged all it can stand, but no more than it can stand. When the profits from power, cooking, and other competitive business become enough to warrant reduction in the comparatively noncompetitive business, it is hard to tell which is most entitled to the reduction, street lighting or the commercial maximum.

700—Schedules and Service.

ELECTRIC-LIGHT PLANTS IN CHINA. *Daily Consular and Trade Reports*, $\frac{1}{2}$ page, August 25, 1914, p. 1072.

Details are given regarding the establishment of electric plants at Kongmun, San Choung, and Sunning City, China. It is said that the Chinese company holding the monopoly for Kongmun, and the other two companies propose to lay lines to the smaller villages, and in this way increase very considerably the number of users. The cost for a 16-candlepower light per month will be about 40 cents gold and, as is customary, a substantial reduction will be made to establishments using a considerable number of lights.

224—Rate Regulation.

THE RAILROAD RATE CASE. Editorial, *Electrical World*, August 29, 1914, p. 407.

The application for a rehearing in this case is commented upon. There is a discussion of the effects which the European war has had upon the situation.

616.1—Street Lighting.

THE METER BASIS FOR STREET LIGHTING CONTRACTS. *Electrical World*, 1 page, August 29, 1914, p. 431.

The terms of the new street-lighting contract, entered into between the city of Bessemer, Michigan, and the Gogebic and Iron Counties Railway and Light Company, are given. The contract provides for the ownership of the street lamps by the city, and arranges for the purchase of the necessary electrical energy upon a meter basis from the local central station. There is a discussion of the advantages to be secured by both municipality and company from this form of contract.

224—Rate Regulation.

RAILWAY RATE INCREASE IN IRELAND. *Daily Consular and Trade Reports*, August 24, 1914, p. 1053.

The recent decision of the British Railway and Canal Commission, refusing the application of the Great Southern & Western Railway of Ireland for a general 4 per cent increase in merchandise and package rates, is discussed. The ground of

the decisions is that recent augmentations of wage and fuel costs have been more than offset by prudent and intelligent retrenchment and improved methods. This judgment affects directly one-third of the railway mileage of Ireland and will probably immediately affect most of the remainder.

INVESTMENT AND RETURN

371—Sliding Scale of Rates and Dividends.

CLEVELAND TRANSFER CHARGE RESTORED, and NEED FOR CLEVELAND IMPROVEMENTS MISUNDERSTOOD. New Items, *Electric Railway Journal*. August 29, 1914, p. 404 and p. 400.

These articles discuss respectively the automatic increase in Cleveland fares resulting from the fact that the interest fund has dropped below \$300,000; and the charges brought by various councilmen holding that the company is spending too much money for carshops and buildings, and is not endeavoring to keep the fare at 3 cents, and accusing Peter Witt, street railway commissioner, of recommending the expenditure of too much money.

350—Total Revenue, Expense, Income.

EXPRESS COMPANIES. News Item, *The Economist*, August 29, 1914, p. 367.

An eastern authority states that 11 express companies operating throughout the country and having a mileage of over 300,000 miles, have actually sustained a loss of 85 per cent during the last 10 months. The interstate commerce commission, in its official statements for the 10 months ended April 30, gives the operating income of these 11 companies as \$628,487. This is but 15 per cent of the amount for the corresponding period of 1913, when the aggregate operating income amounted to \$4,231 465. The showing is the direct result of the increased tonnage handled through the parcels post. And this decrease in tonnage handled by the express companies has come at the same time as the 16 per cent decrease in rates. This situation also works a hardship on the railroads, as it cuts down their income. For the parcels post increase is carried in mail cars and at a less rate proportionately than formerly paid by the express companies for the handling of their business by the railroads. A table is given showing the results obtained by the 11 companies to April 30 with comparisons.

PUBLIC SERVICE REGULATION

226.2—Extension of Service.

FORMULAS FOR ESTIMATING YEARLY EXPENSES OF PROPOSED EXTENSIONS OF DISTRIBUTION SYSTEMS OF PUBLIC UTILITIES WITH SPECIAL REFERENCE TO WISCONSIN UTILITIES, by H. E. PULVER. *Wisconsin Engineer*, 13 pages, May, 1914, p. 350.

Formulas are given for use in estimating the yearly expenses of proposed extensions of the distribution systems of some public utilities in the state of Wisconsin. The importance of the problem of extensions is commented upon. It is said that while practically all utilities desire more profitable business and are usually willing to extend their distribution systems to secure such business, very few of them have any definite rules or formulas for estimating whether or not a proposed extension will be profitable. In general the distribution system should be extended if the estimated gross yearly revenues from the proposed extension are equal to or greater than the estimated total expense (including profit) of the extension for one year. In some cases it may be advisable to build an extension which will not be profitable at once, providing that there are good chances to secure additional

customers for the extension during the next few years. In making an estimate of the yearly revenues of a proposed extension the smaller utilities do not appear to have found much trouble but they have usually experienced some difficulties in preparing an estimate of the yearly expenses of that extension.

210—Organization of Commissions.

NEW COLORADO COMMISSION. News Item, *Electric Railway Journal*, August 29, 1914, p. 401.

Governor Ammons, of Colorado, has named George T. Bradley as a member of the State Public Utilities Commission which replaced the State Railroad Commission of Colorado on August 13. When the public utilities law was enacted it provided that A. P. Anderson and S. S. Kendall, two of the members of the Railroad Commission, should be two of the three members of the new commission. Mr. Bradley is the third member. The law was suspended until August 13 through the filing of a referendum petition, but Judge George W. Allen, of the district court, recently held the petition was fraudulent, and enjoined the Secretary of State from submitting the law to the people. The act extends the jurisdiction formerly exercised by the State Railroad Commission, which had control only over railroads, to every form of public service, including telephone, water, light, power and telegraph. Mr. Anderson, of the commission, said:

"While the new act requires a much larger office force than we now have, we do not propose to make any very large extension of the force at the present time. The two 'revenue making' sections of the bill are still held up by a petition referring them to vote of the people at the coming election. The act appropriated \$25,000 to maintain the commission, with the expectation that there would be considerable revenue from fees, but these fees will not be forthcoming until after the election, and if the referred sections are defeated we will get no revenue at all until after the Legislature can meet and amend the act."

226—Service.

DEPARTMENTS AND BUREAUS OF THE COMMISSION (NEW YORK, 1ST D.): THE BUREAU OF GAS AND ELECTRICITY, by THOMAS D. HONSEY. *Public Service Record*, 1½ pages, August, 1914, p. 8.

An outline of the work done by the New York Commission for the First District in connection with the testing of gas and electric meters, of methods used and results attained, is given.

MUNICIPALITIES

810—Municipal or Local Regulation of Utilities.

CINCINNATI RATE REGULATION DEFERRED. News Item, *Electrical Review*, August 29, 1914, p. 414.

The City Council of Cincinnati, Ohio, has passed an ordinance extending for three months from September 1, the contract agreement with the Union Gas & Electric Company, regulating the rates to be charged for current in the city. It is estimated that the city will not be in a position to fix new rates intelligently until the valuation now going on is completed.

830—Public Ownership.

SAVING UNDER GOVERNMENT OWNERSHIP. Editorial, *Electric Railway Journal*, August 29, 1914, p. 373.

Reference is made to the recent investigation made by Mr. Edward P. Ripley of the question of the savings that would result from government ownership of railways on account of the use of government credit. Being in doubt as to the accuracy of a statement by Clifford Thorne that the government would save \$400,000,000

by financing the railroads on a 3 per cent basis, Mr. Ripley wrote to Sir George Paish, editor of the London *Statist*, who is well known over the world as an authority on financial matters. In reply this expert stated that one could not possibly calculate a greater profit from immediate ownership than about \$60,000,000 per annum on the common stock. Moreover, there could be no immediate saving of interest from government purchase as regards the funded debt, although a barely possible refunding at the maturity of the existing bonds might save \$70,000,000 per annum. That such a saving as this is incomparably small when placed against the inevitable extravagance, waste and loss which results from government ownership is a fact upon which we do not need here to dwell. The chief point to be noticed is the difference between the computations of amateur railway economists and those of a man thoroughly understanding railway finance. American Newspapers have in recent years been surfeited with figures and articles written by government ownership advocates with a maximum of assurance and a minimum of information. A few pertinent facts from the real authorities in the field are often sufficient to overthrow the innumerable statements bandied about by such writers.

GENERAL

910—Promotion and Growth of the Business.

OLD HOUSE WIRING AND SPECIAL CAMPAIGNS, by E. C. KIMBALL. Paper Read before the Sixth Annual Convention of the New England Section of the N. E. L. A., September 2-4, 1914. 11 pages.

The results of the wiring campaign conducted by the Edison Electric Illuminating Company of Boston, are given. The company financed housewiring, for which the customer paid in small monthly payments. The plan has been so successful that it has been adopted as a permanent means of securing business.

786—Tests and Accuracy of Meters.

THE RELATION OF METER MAINTENANCE TO REVENUE, by G. F. ATWATER. Paper Read before the Sixth Annual Convention of the New England Section of the N. E. L. A., September 2-4, 1914. 9 pages.

This points out in a general way that to get the greatest efficiency from an electric property and thereby the greatest revenue, a systematic and careful inspection and adjustment of the instruments used in measuring electrical energy is essential. There is a consideration of the several conditions which have an influence in the accuracy of such a meter, among which are friction, change of power factor, and frequency, overloads, light loads, and short circuits. The importance of installing a meter which, operating normally, shall be of such a size that it will be nearly fully loaded, is pointed out. There is a discussion of the testing of meters.

786—Tests and Accuracy of Meters.

MUNICIPAL METER TESTING IN CHICAGO. *Electrical World*, 1-6 page, August 29, 1914, p. 424.

This states that last year a new section was added to the Bureau of Electrical Inspection of the city of Chicago. It is charged with the duty of testing electric meters, particularly watt-hour meters. Tests are made in compliance with a city ordinance which provides, among other things, for an adjustment in the case of overcharge or undercharge where meters are more than 4 per cent fast or slow. In the last six months of the year 1913, 262 electricity meters were tested, but only eleven of these tests were on complaint, perhaps because the service has not become well known to the public. Results of the tests showed twelve meters slow and twelve meters fast, or 4.8 per cent in each case, 90.4 per cent of the meters tested being found accurate. Of the ones tested on complaint, none was slow, two were fast, and nine were accurate.

COURT DECISION REFERENCES.

244—Rehearings and Appeal.

Appeal of CITY OF NORWALK. Decision of the SUPREME COURT OF ERRORS OF CONNECTICUT. July 17, 1914. 91 Atlantic 442.

The Public Service Commission of Connecticut apportioned the cost of a bridge between the municipality and a street railway company. The city appealed, and the company demurred to the appeal, objecting to the jurisdiction of the Public Service Commission, and questioning the jurisdiction of the Superior court.

"We think such an apportionment of expense is one of those matters which lies 'so near the border line of judicial power that its definition calls for subtle distinctions, and its nature depends to an extent on the purpose and manner of its use.' *Malmo's Appeal*, 72 Conn. 1, 5, 43 Atl. 485, 486. On the one hand, it is in practical effect a money judgment, though not enforceable by execution without the aid of the superior court. Public Utilities Act, Sec. 11. On the other hand, it is so intimately connected with the purely administrative question of the character of the particular repair, strengthening, or reconstruction that its determination has been properly left to the discretion of the Public Service Commission. Like the selection, under statutory limitations, of persons suitable to be licensed to sell intoxicating liquors, it is competent for the Legislature to commit such apportionment either to judicial or executive officers as may be found necessary. *Hopson's Appeal*, 65 Conn. 140, 146, 31 Atl. 531. There is therefore no valid constitutional objection to the appellate jurisdiction of the superior court in the premises."

224—Rate Regulation.

STATE ex rel GOSS et ux. v. METALINE FALLS LIGHT AND WATER CO. Decision of the SUPREME COURT OF WASHINGTON. July 30, 1914. 141 Pacific 1142.

The Company increased a customer's flat rate of \$5 per month to \$8.50 per month. The customer tendered the former rate, but the company refused the tender and subsequently cut off the water supply. The Court holds that the Public Service Commission has jurisdiction in the matter.

226.3—Joint Service.

PACIFIC TELEPHONE & TELEGRAPH CO. v. WRIGHT-DICKINSON HOTEL Co. et al. Decision of the DISTRICT COURT, D. OREGON. May 4, 1914. 214 Federal 666.

The Company appeals from an order of the Oregon Commission directing it to make physical connection with the Home Telephone Company in order to supply service to a hotel where the latter competing company has a private switchboard

"Two questions of vital concern are presented by the controversy. The first is whether the Oregon Railroad Commission is authorized and empowered to impose regulation upon telephone and telegraph utilities in the way of requiring physical connection between two or more competing lines, and an exchange of service over such lines; and the second, whether such requirement is the exercise of eminent domain and the taking of property without just compensation, or the taking of property without due process of law, contrary to the inhibition of the federal Constitution" . . .

The court analyzes the provisions of the Oregon law on the subject, and upholds the Commission's decision.

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Rate Research

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No. 24

For statement of facts and opinions contained in papers abstracted herein, the Association does not hold itself responsible

RATES

400—Rate Theory.

RATES: A RÉSUMÉ AND COMPARISON OF RATE THEORIES, by STACY HAMILTON. Extracts from a paper read before the joint meeting of the Northwest Electric Light and Power Association, and the Pacific Coast Section of the American Institute of Electrical Engineers, Spokane, Washington, September 9-11, 1914.

"There are two general basic theories on which a system of rates may be established, i. e., the cost of service theory and the value of service theory.

410—

Cost of Service Theory.

"The cost of service theory, as its name implies, aims to charge each individual consumer directly in proportion to the cost of serving that consumer. Such a basis would seem to be the most equitable and proper for the charges of any public utility, and, theoretically, this is no doubt true. It is found, however, in the practical application of rates, that there are a number of other factors which must be considered.

"Perhaps the most direct application of the cost of service theory is found in the differentials allowed for quantity, load factor, time and character of demand, minimum charge, etc. Even these differentials, however, are often governed to a certain extent by the value of the service to the consumer.

"Owing to the multiplicity of factors entering into a determination of the exact cost of rendering service under varying conditions, it naturally follows that a certain amount of averaging must be resorted to for the sake of simplicity in the expression of the rate schedules. Under the cost of service theory we have, at one extreme, the attempt to differentiate in proportion to the exact cost to each individual condition of service. This must necessarily result in a schedule so complicated as to be entirely impracticable. At the other extreme we have a general average or uniform rate to all consumers based on the general average cost of rendering service to all consumers. Where the conditions of service and the cost of supplying service vary to a considerable extent, as they do in the case of electric light and power service, a general average rate per K. W. H. per lamp. or per day, naturally results in a degree of inequity between individual

EDITORIAL NOTE.—All indented matter is direct quotation.

consumers which the Central Station is unable to justify. Such an average rate would also tend to retard the development of the company's business, to the detriment of the community as well as to the company itself. Only in cases of complete monopoly have uniform rates been found to work out satisfactorily, the United States postal charges being, perhaps, the best example of this form of rate. Even here it is to be noticed that in the Parcel Post Division, which is in competition with the express companies, zone differentials are resorted to, the uniform flat rate applying principally to first class mail, where the Government has an absolute monopoly, competition being prohibited by law.

"As a compromise, therefore, between the extremes of the complexity of individual cost of service and the inequity of average cost of service, the trend of commission and court decisions seems to be toward averaging, more or less arbitrarily, the various classes of service; that is, basing the rates for each class on the average cost and average conditions governing that class as a whole.

450—

Value of Service Theory.

"The value of service theory, as its name implies, contemplates the value of the service to the consumer as the proper basis on which the charges should be made. This basis has undoubtedly predominant influence in the establishment of prices in other lines of business, and it bears no small part in the consideration of the proper charges for electric light and power service as well.

"This theory, of course, when carried to extremes, is quite apt to result in an unreasonable charge to those consumers who have no other alternative but to use the company's service at whatever rate may be demanded. Aside from this extreme condition, however, the value of service theory is a very important factor in establishing a proper schedule of charges, especially in its influence toward the encouragement and development of the use of the Central Station's service.

"In a consideration of the value of service theory, there are found to exist two general classes of business, usually termed competitive and non-competitive. This classification is, of course, under the assumption that the light and power utility has no direct competition from another utility of the same class.

Competitive Business.

"In the competitive class come first the large office buildings, hotels, factories, mills and other large units who are in position to consider the installation of an independent electric plant. The value of the Central Station's service to such consumers is necessarily governed by the cost at which the consumer can furnish electric service from a plant of his own. We also have in the competitive class those consumers who can use steam or gas engines for power, and gas, oil, etc., for lighting.

"The latter forms of competition are not quite so direct as the independent electric plant first mentioned, inasmuch as they do not always completely replace the value of the Central Station's electric service to the consumer. Under these conditions, the cost to the consumer to furnish his own service by means of these various substitutes does not quite so directly control the value of the Central Station's service to the consumer and consequently the Central Station's rate necessary to get the business.

Non-Competitive Business.

"The strictly non-competitive consumers of an electric light, power and heat utility are decidedly scarce, as there are very few requirements of light, power and heat which cannot, in the event of unreasonable electric rates, be fulfilled in some other form. The Commercial Department of any electric utility is well aware, even though it has no direct electric competition, that its business is far from being a monopoly, as is popularly supposed. There are, however, undoubtedly a number of consumers to whom electric service is of such additional value in furnishing light, power and heat, that they are willing and able to pay a rate considerably higher than the other forms of service would cost. Theatres are perhaps the best example of this class.

"Numerous non-competitive conditions can be found outside of the electric light, heat and power utilities, such as in the case of water supply, transportation, and, last but not least, the United States Postal Service, in the latter case competition being strictly prohibited by law.

"In the establishment of a schedule of electric rates for these various non-competitive and competitive consumers, we have, in the first case, the limitation that the rate charged to the strictly non-competitive consumer must be reasonable and be governed by the cost of serving such a consumer. In the second case, the rates offered to the large competitive consumer should be at least sufficiently high to pay something more than the direct additional cost of serving such a consumer, or the increment cost, as it is sometimes termed.

Differentials to Meet Competition.

"There seems to be a diversity of opinion as to the equity of charging these large competitive consumers less than their full pro rata of the total cost of serving them, including all fixed charges. It is contended by the opponents of this method of charging that it discriminates against the non-competitive consumers, inasmuch as they must necessarily be charged more than their pro rata of the cost of service to compensate for the low rates which must be made to the competitive consumers to get the business.

"The fact remains, however, that if this principle were not applied, a large amount of competitive business could not be obtained, with

the result that the non-competitive consumers would be obliged to carry the entire burden of that large portion of the fixed charges and operating expenses which remain practically constant, regardless of whether or not the additional competitive business is on the system.

"In the case of railway rates, this principle has been established for a number of years in the form of the so-called 'Pacific Coast Terminal Rates,' designed principally to compete with water transportation. Even after the adjustments now contemplated by the Interstate Commerce Commission and the United States Supreme Court have been effected, this principle will continue in a modified form.

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Feature Rates.

"The value of service theory is often quite prominent in the classification of the various forms of service.

"Most Central Stations usually have one or more so-called feature rates, which have, as their object, the development of electric service along certain lines, such as cooking, heating and various forms of domestic power.

"With the present state of development of electric cooking and heating appliances, it is evident that a given quantity of electric energy, when used for cooking and heating, has not as high a value to the consumer as when used for lighting with the modern high efficiency lamps. In recognition of this fact, we have the low rate of 5 cents, 4 cents, 3 cents, and so on down to the one cent rate, which has been offered by some English companies, aiming towards the encouragement of the domestic use of electric energy for cooking, heating and power purposes, while at the same time a materially higher rate exists for lighting service.

"There may be some attempt to defend this differential from the 'cost to serve' standpoint, on the ground that cooking and heating are off-peak loads. If special circuits are run for this class of load exclusively, and the service is actually cut off during the station's peak, a considerable differential between lighting and heating can, no doubt, be justified, purely from the 'cost to serve' standpoint. In actual practice, however, cooking and heating services on this special rate are quite often taken from the lighting mains, and, while more or less of the domestic cooking and heating consumption of energy will perhaps occur during the off-peak period, the fact remains that when service is rendered under the condition just mentioned (which is quite common among Central Stations), a large part of the maximum demand of the cooking and heating appliances will often come directly on the Central Station's winter peak, between 4.30 P. M. and 6.00 P. M. Under these conditions the differential can hardly be based on other than the value of service theory.

"A similar condition exists in other forms of lighting and power feature rates; that is, the value of service is practically the only

valid reason for the differential in the rates charged for two or more classes of service furnished under practically identical conditions. A good example is the lower rate for power service furnished from underground direct current systems, where the power and light are delivered from the same mains and through the same service cables.

"In calling attention to these conditions, it is by no means the intention to infer that such a differential should not exist. It is quite evident that attractive prices must be offered for certain forms of heat and power, especially during the development stage, in competition with other forms of furnishing the required heat and power.

"Outside of the electric industry, a very good example of the value of service theory is shown in the rates charged for Pullman berths. The investment in an upper berth is considerably higher than in the equipment necessary to convert the seats into a lower berth, and, on the cost of service basis, would call for a higher charge than the lower berth. In practice, however, the desirability or value of the lower berth to the traveling public is so much greater than the upper berth, that the rates have been made approximately 20% lower for the upper berth. This differential in the price of upper and lower berths was ordered by the Interstate Commerce Commission (20 I. C. C. Reports, 21 to 32)

"The attitude of various commissions and courts toward the value of service theory may be found expressed in the following:

INTERSTATE COMMERCE COMMISSION.

"Railway Rate Theories of Interstate Commerce Commission," by M. B. Hammond, pages 181, 182, 186, 187, 529.

MASSACHUSETTS BOARD OF GAS AND ELECTRIC LIGHT COMMISSIONERS.

Massachusetts Gas and Electric Reports 1909, 33, 42 to 47.

Massachusetts Gas and Electric Reports 1910, 20, 50, 51.

Massachusetts Gas and Electric Reports 1911, 29, 39.

Decision 6/7/1913 re Marblehead Municipal Plant's application to reduce rates.

Decision 5/24/1913 re Westfield Municipal Plant's application to reduce rates.

Decision 7/28/1913 re complaint against Edison Electric Illuminating Company of Brockton, Mass.

MICHIGAN STATUTES.

Public Acts 1909, No. 106, Sec. 7.

CALIFORNIA RAILROAD COMMISSION.

Town of Willets vs. Willets Water & Power Company, Case No. 297.

NEW YORK PUBLIC SERVICE COMMISSION, 2ND DISTRICT

Decision 4/2/1913, in re Complaint of Mayor of Buffalo vs. Buffalo General Electric Company.

SUPREME COURT OF NEW JERSEY.

Decision 7/7/1913, Public Service Gas Company vs. New Jersey Board of Public Utility Commissioners, 87 Atlantic 651.

WISCONSIN RAILROAD COMMISSION.

City of Beloit, 1910, 5-W. R. C. R. 632.

Ripon Light and Water Company, 1910, 5-W. R. C. R. 45.

Decision 11/14/1913, re Application of Neshkoro Light and Power Company to increase rates.

Decision 8/4/1913, re Complaint against Milwaukee Gas Light Company.

400—

Rate Theory.

"It is, therefore, seen that while the cost of service is, perhaps, theoretically the most proper and equitable basis on which to establish the Central Station's charges, and is generally accepted as the primary basis of rate schedules, such a basis must often be considerably modified, not only for the sake of simplicity in the expression of the schedules, but also by the commercial and economic considerations of the value of the service and the development of the business.

"Various public utility commissions, courts and other authorities give recognition to both these theories, and the general trend of opinions and decisions seems to be towards the cost of service as a primary basis of rates, modified, however, by the value of service theory.

"Individual rates in a system of charges may sometimes fall entirely under one of these theories, to the complete exclusion of the other theory. The differential between the upper and lower Pullman berth rates is such a case, the cost of the service being entirely ignored in the establishment of the differential.

"At the other extreme, we may cite, as an example, strictly off-peak rates which are offered for any form of use which the consumer may desire.

"These are rather extreme cases, however, and an analysis of the rate schedules of almost any central station will indicate that both theories are usually taken into consideration "

EDITOR'S NOTE.—This paper contains also a brief discussion of the various forms of rates now used by Central Stations, their advantages and drawbacks.

COMMISSION DECISIONS**MASSACHUSETTS.****729—Maximum Rate.**

Application of the Municipal Light Board of the TOWN OF WAKEFIELD Asking for Consent to Establish Certain Prices for Gas and Electricity

Alleged to be Less Than Cost. Decision of the BOARD OF GAS & ELECTRIC LIGHT COMMISSIONERS Refusing to Approve the Rates. August 5, 1914.

The City of Wakefield wishing to establish rates for gas and electricity alleged to be less than cost, made application to the board as required by section 22, chapter 34 of the Revised Laws.

"At the hearing it was conceded by the municipal light board and manager, that if the respective costs of gas and electricity were computed in the manner prescribed by the statute, they would doubtless exceed the proposed maximum prices. It was their contention, however, that the method prescribed in the statute was not a fair method of determining the cost, and that the prices proposed would in fact yield a revenue ample to take care of the operating expenses of the plant, its fixed charges and the annual allowance for depreciation required by law."

The Commission made investigations as to the amount of operating expenses and as to the correctness of the records of the output of both gas and electricity, and found that while the cost of electricity, as computed in accordance with the statute did not exceed the proposed maximum net price, the cost of gas did.

"In view of these facts, it is reasonable to expect that, if the Board's consent is given to the establishment of the proposed maximum net price, all of the gas supplied by the plant to its consumers will be sold at a substantial loss. A reduction in price often stimulates a demand which results in an increased output without a corresponding increase in cost, and the business problem which this fact suggests is always to be considered. But in this case there is no sufficient reason to believe that a loss so substantial is likely to be absorbed by the increase in output to come from the lower price. The last annual statement of the financial condition of the business indicates losses which have not yet been recovered. Without an extensive and thorough investigation, it is impossible to determine when and how this loss occurred, and for the decision of the present case this seems to be unnecessary. Some portion of former losses has been recently regained, particularly in the last three years. Until these can be further reduced, however, it would seem to be the part of ordinary business prudence for the town to require consumers of gas to pay all the operating expenses and fixed charges. If it be claimed that the town will make some profit on its electricity supply at the new rates, yet, in view of the great difficulty of an accurate reliable determination of this fact, it would seem far wiser to await the demonstration which experience may give, and then consider how far, if at all, the electric business should be made to restore losses in the supply of gas.

600—Rate Differentials.

"As to the differential prices for light and power [see schedule below] under which electricity is sold at less than 12 cents a kilowatt-hour,

it is clear that many, if not all, are less than the average cost of the current computed as defined by the statute. But these rates have been in force for a considerable time, and have secured an amount of business which probably could not have been otherwise obtained and which has proven advantageous to the plant and the business as a whole. These differentials for electricity were not the direct occasion for this application, and under the circumstances, the Board sees no reason why it should interfere with their continuance."

720—Rate Schedules.

The rates which the town wished to establish were \$1.40 gross a thousand cubic feet for gas, with a discount of 20 cents for prompt payment, \$1.20 net, and 15 cents gross a kilowatt hour for electricity, with a discount of 3 cents for prompt payment, or 12 cents net. The present rates are as follows:

GAS.**Rate.**

\$1.50 per thousand cubic feet.

Prompt Payment Discount.

20 cents for 100 to 19,900 cubic feet per month.
30 cents for 20,000 to 29,900 cubic feet per month.
40 cents for 30,000 to 39,900 cubic feet per month.
50 cents for 40,000 cubic feet per month.

ELECTRICITY.**Lighting.****Rate.**

18 cents per kilowatt-hour for current consumed.

Prompt Payment Discount.

3 cents per kilowatt-hour.

Store Window Lighting.

Every night until 9 o'clock, commercial lights burning until 12 o'clock, 3 or more arc lights.

Rate.

18 cents per kilowatt-hour for current consumed.

Prompt Payment Discount.

6 cents per kilowatt-hour.

Moving Picture Theaters.**Rate.**

13 cents per kilowatt-hour for current consumed.

Prompt Payment Discount.

3 cents per kilowatt-hour.

Signs.**Rate.**

10 cents per kilowatt-hour for current consumed.

Prompt Payment Discount.

3 cents per kilowatt-hour.

Power.**Rate.**

10 cents per kilowatt-hour to

6 cents per kilowatt-hour for 1500 kilowatt hours or over per month.

Prompt Payment Discount.

3 cents per kilowatt-hour.

CALIFORNIA**221.1—Issue of Stocks and Bonds.**

Application of the SOUTHERN PACIFIC COMPANY for Authority to Issue Fifty-five Million Dollars of Five Per Cent Bonds. Decision of the CALIFORNIA RAILROAD COMMISSION, Granting the Application, February 9, 1914.

The applicant has railroad property located in five states and the proceeds from the proposed bond issue are to be used in additions and betterments and in purchase of additional equipment to various parts of its system.

It is impossible for this Commission, acting within the jurisdiction of one state, to investigate or supervise completely, the issuance of securities by a corporation such as applicant operating through and between five separate states of the Union where the lien of the securities extends over all of its property and the expenditures are to be scattered over its entire system. The best that can be done is to conclude generally whether the proposed bonds are reasonable in amount, reasonably secure as to payment of principal and interest, and that the proceeds are to be used for proper purposes.

PENNSYLVANIA**132—Protection from Competition.**

Application of the HARMONY ELECTRIC COMPANY, For Approval of Contract to Render Service to Municipality in Lieu of Service Furnished by the PENNSYLVANIA POWER COMPANY. Decision of the PENNSYLVANIA PUBLIC SERVICE COMMISSION, Dismissing the Application and Holding that Duplication Should be Prevented. July 9, 1914.

The Pennsylvania Power Company has been furnishing general and municipal electric service in the Borough of Ellwood City. Upon expiration of the contract for service to the Borough, the Borough passed an ordinance granting a contract to the Harmony Electric Company and the Commission is asked to approve this contract. The fact that the service of the Pennsylvania Company has been adequate, that the present council and representative business men disapprove the granting of the contract to the applicant and the difference in the rates

offered by the two companies were all mentioned as matters to be considered but the commission states that the chief point at issue in this proceeding is the principle of competition between public utilities.

In the event of the approval of the contract, there will be two competing companies operating in a small municipality where one of these companies was heretofore able, without taxing its capacity, to furnish all the light that was required and of a quality that was wholly satisfactory to the people of the community. Under the conditions as existing, it could hardly be contended with success that it would in any wise be an advantage to Ellwood City or to the two companies competing to allow such a contingency to arise.

It is a matter of common observation that where the policy of promoting competitive traffic between corporations engaged in public service business is too freely encouraged, more especially in communities of limited population, the practice is followed as a rule by consequences that are disastrous to all the interested parties. The community that consumes the commodity, the utility that furnishes the service, the general public that invested in good faith, must all be properly safeguarded in their rights and interests when a public service company is invited to enter a municipality to do business under competitive conditions.

The spirit of the Act creating this Commission contemplates that this very thing be done. Before a Certificate of Public Convenience is issued, it must be established that the required service is necessary or proper for the accommodation, convenience or safety of the public.

The Commission is not justified in permitting competition anywhere nor taking such action as may invite it, unless the area and population served, the needs of the community or the prospects of the municipality as based upon its growth and development reasonably show that the public welfare demands it.

This principle of protection must also be extended to the public utility to the end that the individual citizens who have invested in its plant equipment in good faith may be duly protected in their interests. . . . This idea is based on the principle that the power or authority to regulate the service of a public utility by law carries with it as a corollary the duty to protect the property of the utility whenever that is threatened with consequences that may endanger the future existence of the company. . . .

The Commission is not unmindful of the fact that the line is not always clearly drawn between competition that might be encouraged and that which should be denied. But under a system of public regulation, such as is provided by the Act under which the Public Service Commission of the Commonwealth exercises administrative powers, it is safer to draw the line against rather than in favor of competition that appears to be of doubtful propriety. This seems to be the proper view to take of the matter, since there is no remedy

through the action of the Commission to prevent the harm that will be done to the business interests of the community by unwise competition when once established; whereas under the regulating powers of the Commission, which in effect may be said to have all the checks and restraints of normal, well-balanced competition, there can be no harm done to the community by the corporation left in sole control of the business of furnishing the required public service of a municipality. . . .

CALIFORNIA

831—Purchase by Municipality.

Application of the CITY OF EUREKA, asking that the CALIFORNIA RAILROAD COMMISSION Fix the Compensation to be Paid for the Water System of the EUREKA WATER COMPANY. Decision of the Commission, Determining the Value of the Property Specified in the Application. March 23, 1914.

"This is the first case to arise under the amendment to the Public Utilities Act empowering this Commission to fix, on application of certain named governmental agencies, the compensation to be paid by such agencies for all, or any designated portion, of the property of a public utility. . . . From a consideration of the statute here involved, it appears that the applicant must specify the property, whether it is all of the property of the public utility involved or a part thereof, which it desires to acquire, and this Commission has no authority to determine whether the power exists on the part of such applicant to acquire the property so specified. That power is specially reserved to the Superior Court when the actual condemnation is sought to be made and findings of this Commission are filed. It would then seem to follow that this Commission cannot exclude any of the property listed or add to it; its sole power being to fix compensation to be paid to the utility for the property sought to be acquired. . . . It appears, then, if the Commission is limited, as I have suggested, to fixing value upon the items set out in the application, that any value fixed upon other items or the exclusion of items set out in the application might be cause for the court to set aside the findings of the Commission. And, furthermore, under the wording of the act, it would appear that even when strictly following the application by placing values on those items alone set out in said application, if thereafter there are found items of property therein not necessary to the public use, and the Superior Court finding that the applicant has not the right or power to take any of the items set out in the application, said court will be required to reject the entire value. Because, if this is not the case, the court would have the power to divide the property and exclude a portion as not necessary and fix the value on the remaining portion. Inasmuch as the court has no power to fix value upon any portion of the property, the Commission's power is limited strictly to the

fixing of such value. In my opinion, the exclusion by the court of any item upon which a value has been placed by the Commission will be cause for the rejection of the entire valuation."

311.4—Market Value.

Considering a proper basis of valuation in condemnation proceedings for the purpose of municipal acquisition, the Commission finds that the Supreme Court of the State has uniformly held that in condemnation proceedings of all sorts, market value is the main element to be considered. In conclusion the opinion states:

"I shall assume, therefore, that the decision of the courts in this and other states to the effect that market value is the main element to be considered in determining the price to be paid for property sought to be condemned, contemplated the entire property sought to be condemned and not specified portions considered apart from the relationship and the restrictions which the law forced upon them; and on such theory I shall give whatever effect it seems to me to be proper to the market value theory of valuation as applied to the entire property here under consideration. In considering the market value of a property the earning power of the property is always a legitimate inquiry which, of course, as has already been said, is not true in a valuation for rate fixing purposes. . . . Any wise purchaser of a public utility property would unquestionably investigate the condition of the property with a view to determine whether under the rules of law applicable to the fixing of rates by governmental authority there was likelihood that the present scale of rates would be maintained; and if it were found that such rates, although the legal rates at present, were likely to be cut down if governmental authority followed the rules laid down for fixing such rates, then unquestionably the market value of such utility would be in so much impaired. In short, the permanency of the present earning power, either of a utility or any other property, largely affects its market value."

REFERENCES

RATES

616.1—Street Lighting.

INDIANAPOLIS STREET-LIGHTING CONTROVERSY. *Electrical World*, $\frac{3}{4}$ page, September 5, 1914, p. 457.

An account is given of the controversy going on in Indianapolis over the contract entered into between the city and the Merchants' Heat & Light Company, whereby the company agreed to furnish street-lighting at \$41.98 per lamp.

617—Breakdown or Auxiliary Service.

PEOPLE EX REL C. PERCEVAL V. THE PUBLIC SERVICE COMMISSION FOR THE FIRST DISTRICT. APPELLATE DIVISION OF THE SUPREME COURT OF NEW YORK. BRIEF FOR RELATOR. 20 pages.

This is the brief for the C. Perceval corporation in this case before the Appellate Division of the New York Supreme Court. (See 5 RATE RESEARCH 311.)

INVESTMENT AND RETURN

252—Commission Annual Reports.

FOURTH ANNUAL REPORT OF THE BOARD OF PUBLIC UTILITIES, LOS ANGELES, CALIFORNIA. July 1, 1912-June 30, 1913. 182 pages.

This report gives a brief account of the work accomplished by the Board, and the results of preliminary studies and conclusions on questions of importance. The work is divided in four main divisions, as follows: Part I. Work of the Department, Part II. Railroads and Carriers—Statistics, Finance and Operating, Part III. Public Utilities—Statistics, Finance and Operating, Part IV. Applications and Complaints.

On pages 130-136 the electric rates fixed by ordinance of May 28, 1913, are given accompanied by a table showing the comparative electric light rates in various cities. On page 137 the municipal ownership project is discussed.

MUNICIPALITIES

830—Public Ownership.

MUNICIPAL OWNERSHIP. Editorial, *The Saturday Evening Post*, September 5, 1914, p. 26.

In connection with a discussion of municipal ownership of transportation facilities for New York and Chicago, it is said that no one can pretend that there is any such steadiness, competence and integrity in the government of New York, Chicago or Philadelphia as would give reasonable ground for even a hope that it could conduct great transportation enterprises economically; and, with the broadening in recent years of the city's power of regulation over public utilities, there is less reason why the city should own them outright. New York holds title to the subways, but for at least half a dozen years has been struggling ineffectually with vast turmoil and clamor, to get them extended.

Almost every day's newspaper shows that the large American city has not yet found itself. It can't keep its police from grafting or be trusted with the money to buy meat for dinner if there is a saloon on the way to market. It trips over its own feet; and the chief use it has of its arms is to flop them in excited bewilderment. For example, witness the six-year-long subway squabble in New York.

830—Public Ownership.

TOLL OF POLITICS, by WILLIAM G. DEACON. *Public Service*, 2 pages, September, 1914, p. 71.

Figures are given showing that Seattle taxpayers are forced to lose thousands because of faulty municipal management. It is pointed out that last year the city paid to its own lighting department a total of \$211,013.65 for street lighting, although \$67,820.66 of that amount could have been saved to the taxpayers by having the work done by a private company. The same service, item for item, could have been obtained for \$143,192.99 from the Puget Sound Traction, Light and Power Company at rates named in a formal bid submitted to the city by the company less than two years ago. Reference is made to the fact that computed at the rate for last year, 43.87 mills, the city lost \$109,675 in taxes. It is said that responsibility for both the unquestionable waste of \$67,820.66 for street lighting expense and the overcharge of \$14,076.34 for service at the city buildings may be placed definitely by the fact that the city council not only controls the expenditure for public lighting, but fixes all rates for the municipal electric plant as well. With intelligent and just regulation of the plant, by the State Utilities Commission or any other disinterested authority, such unfairness in rate-making for city service would not be possible. The municipal lighting department would have to publish its rates and adhere to them, and its schedules would have to be based

on the relative costs of producing the different classes of services and to be equitable to all classes of consumers. Any study of present conditions in Seattle shows that rates are made with deliberate disregard for relative cost of providing service. The statement is made that the municipal electric plant at Seattle, if it serves no other useful purpose, proves convincingly the urgent public need for non-political and disinterested regulation of city-owned public utilities. It gives clear demonstration of some of the serious disadvantages of having such properties under control of local public officers subject to the influences of city politics.

820—State Regulation of Municipal Utilities.

REGULATION, Editorial, *Public Service*, September, 1914, p. 66.

The fact is noted that while many false ideas have been applied in the course of state regulation of utilities, some economic facts have been established and there has been some gain in knowledge of the equities of public service. One patent economic principle that, for reasons which are plain, has not been accepted at its true value, is that fairness to the public demands honest regulation of the so-called municipal utility plants even more urgently than government supervision of the utilities that are operated by private owners. Perhaps the best proof of this is that any proposal for regulation of municipal utilities on an equality with private ones invariably meets with bitter opposition from the local authorities of cities which have municipal plants. With a city-owned utility a citizen has no means of knowing just what his service is costing him. Besides being a customer of the municipal plant, and paying his electric, or water or gas bills at the established rate, he also is a stockholder in the business, whether he wants to be or not, and must help to make good any losses from operation. This is the uncertain element in his cost of service, for losses from municipal ownership are assessed against citizens in the form of taxes and almost invariably are so disguised that the taxpayer can get no idea of the amount of his compulsory contribution to the support of an unprofitable city utility plant. In municipal ownership, it is common practice for all overhead charges and even some operating costs to be paid out of the general tax funds of a city instead of the earnings of the utility. It is by this means that the officers in charge of a city plant are enabled to make rates that seem low and at the same time show an apparent "surplus" when they issue a published report. But with proper regulation of municipal utilities, in the same manner that many states now regulate those owned by private capital, and with uniform standards of accounting, these subterfuges and other forms of financial jugglery familiar in municipal bookkeeping would be impossible. Then the citizen would know the true cost of service from his municipal plant.

GENERAL

190—General History of Electric Utilities.

COMMERCIAL AND INDUSTRIAL PROGRESS IN PERU. *Daily Consular and Trade Reports*, 19 pages, September 2, 1914, p. 1201.

On page 1211 of this article, information is given regarding The Lima Light, Power and Tramways Co., known as the *Empresas Electricas Asociadas*, which holds practically a monopoly of the three industries in Lima, Callao and suburban towns. There is a discussion of the income, operating expenses, service, etc. It is said that the increase in the gross profits from the light and power department of the company for the year 1913 amounted to \$28,118, while the operating costs were \$2,127 less than in 1912. The service has been maintained with regularity, there being no interruptions of much importance. The principal reason for the decrease in the operating expenses was the smaller consumption of fuel oil in the central steam generators, owing to the increase in the amount of power secured from the River Rimac and the advantageous operation of the high-tension transmission lines between Chosica and Lima.

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No. 25

For statement of facts and opinions contained in papers abstracted herein, the Association does not hold itself responsible

RATE RESEARCH INDEX

The next number of RATE RESEARCH, which is the concluding number of Volume 5, will be devoted entirely to a classified index of Volumes 2-5, and an alphabetical index of Volume 5. Because of the amount of work involved in preparing the index for publication, it may be delayed.

COMMISSION DECISIONS

NEW YORK (2nd D.)

300—Investment and Return.

CITY OF SCHENECTADY V. SCHENECTADY RAILWAY COMPANY, Asking for the Restoration of Low Rates. Decision of the NEW YORK PUBLIC SERVICE COMMISSION (2nd D.), Dismissing the Complaint. May 20, 1914.

"In reaching a decision upon the specific issue here involved (that is to say, upon the question whether or not a lower rate than five cents a ride should be charged in Schenectady), we have had to consider whether the legal five-cent rate, which was in force when these proceedings were commenced and which is still in force, does or does not produce an unreasonable income upon the capital invested in the railway company's urban business. That is really the only question in the case. If it should appear that the return upon the capital invested is not under present conditions an unreasonable one, all things considered, then the question whether these profits might not be cut down somewhat without actually wrecking the railway company need not, we think, be gone into very deeply. As we understand it, the law contemplates that public service corporations shall enjoy a larger latitude in the matter of fixing their rates than they would have if they were held down to rate schedules so calculated as to just enable these corporations to avoid insolvency. To apply this last named test to the rates of fare charged by street railway corporations in New York state would be to drive private enterprise out of this portion of the public service field at a very early date. It could not remain there under any such restrictive and impossible conditions, and that portion of the public which is animated by a sense of fairness in such matters would not

EDITORIAL NOTE.—All indented matter is direct quotation.

except [expect] it so to do. Again, if we should determine that the Schenectady Railway Company's present rates of fare produce no more than a reasonable return upon the capital invested within the five cents fare zone, we need not pass upon the question whether lower fares might not so stimulate the business of the company as in the end actually to swell its revenues rather than to reduce them. No one will deny that this might be the result of charging lower fares. It has often proved to be so in the past, in all lines of business. But it has by no means always proved to be so; and as to what will be the result of lower rates in any given instance depends upon many uncertain factors, and must be viewed rather as a fertile field for speculation and guesswork than as a problem susceptible of exact demonstration. We come back, therefore, to the question in the form in which we first stated it, as the only real question before us. Does the five cents rate of fare, which was in force upon the Schenectady railway within the city limits and which is still in force there, produce upon the capital invested a reasonable dependable return which this Commission is willing to characterize as unreasonably large? If so, it must be reduced. If not, it must be allowed to stand, even though the probable effect upon the company of a reduction might not actually involve confiscation of company's property; and might even, other factors helping, be to increase rather than decrease annual profits."

340—Rate of Return.

The railway company's claim as to the value of its property and the return secured under the present rates is compared with the claims of the city in support of its petition for the sale of six passenger tickets for twenty-five cents. The Commission says that even if the city's claims as to the value of the company's property were all absolutely correct still the present return

"would only represent a yield of between eight and nine per cent on such valuation, and this percentage would of course be materially reduced if any considerable portion of the cost of complying, from time to time, with the provisions of the Public Service Commission law and with the orders of this Commission were to be met out of current earnings instead of out of capital.

"That a conservatively managed company may properly draw upon its annual income account to meet some, at least, of the annual expense caused by the necessity of compliance with the Public Service Commissions Law and with orders of this Commission, is something which will not, we think, be seriously disputed by fair minded people. Precisely how extensively income rather than principal should be used for these purposes is of course a question which would have to be answered differently in different cases. In the present case, we do not feel that the question need be specifically answered, so far as this Commission is concerned, because even a slight charging off against annual income of such betterments and replacements as must be made every year, under our present system

of vigilant supervision over public service corporations, would bring the net income of this company well below the amount mentioned in the preceding paragraph, and to a figure which, in the present case and under existing conditions, we should not feel justified in characterizing as excessive. We say this with a full realization of the fact that the Schenectady Railway Company appears at present to be in a fairly prosperous condition. Our present Public Service Commission Law was intended, as we have said, not merely to permit corporation of this character to accumulate such scant earnings as would keep them out of the bankruptcy courts, but actually to allow them under good managements to attain positions of reasonable assured prosperity. The fact, therefore, that the Schenectady Railway Company seems to have attained that kind of a position does not alter our opinion, that such a decision as is asked for by the complainants here would be regarded throughout the State of New York, and perhaps over a larger area as the equivalent of a warning to private enterprise and capital that these are not particularly wanted any longer in the street railway field. We do not think it well to issue such a warning or what might with some degree of justice be construed as such, at the present time. The result of driving private capital from the work of extending and improving the transit facilities our people now enjoy would, in our opinion, be quite as deplorable from the standpoint of the general public as from that of the financially courageous individuals whose money is now invested in good faith in public service enterprises throughout the United States.

ARIZONA

300—Investment and Return.

I. E. HUFFMAN, MAYOR et al. v. TUCSON GAS, ELECTRIC LIGHT AND POWER COMPANY. Supplementary Order of the ARIZONA CORPORATION COMMISSION, Approving Agreement in Rates. May 8, 1914.

The respondent company appealed from the original order of the Commission (see 4 RATE RESEARCH 20), and brought suit in the Superior Court of Maricopa County, Arizona, praying that the order be set aside. Prior to any trial before the Court, the petitioner and the respondent filed an agreement with the Commission compromising all differences in the issues passed upon by the Commission and further agreeing that the cause pending before the court be dismissed by the Company.

The Commission says:

"The city of Tucson has required this defendant and its associated companies to make large expenditures of money in said city for paving charges and cost of moving poles and wires and the interests of both complainant and defendant in the above cause seem best conserved by the approval by this Commission of the agreement in question, and the dismissal of the case before the Superior Court."

720—Rate Schedules.

The rates set forth in the agreement and approved by the Commission are as follows:

LIGHTING RATES.**Rate.**

- 12 cents per kilowatt hour for the first 100 kilowatt hours per month.
- 11 cents per kilowatt hour for the next 200 kilowatt hours per month.
- 9 cents per kilowatt hour for the next 200 kilowatt hours per month.
- 6 cents per kilowatt hour for the next 500 kilowatt hours per month.
- 5 cents per kilowatt hour for all excess used per month.

Minimum Charge.

\$1.00 for a monthly consumption of 8 kilowatt hours or less.

STREET LIGHTING RATE.**Rate.**

\$76.00 per lamp per annum for the same or similar type of street arc light as that now prevailing, service to be rendered for a period of five years from the date of the agreement.

CALIFORNIA**300—Investment and Return.**

CITY OF MONTEREY V. COAST VALLEYS GAS AND ELECTRIC COMPANY, Alleging that the Rates for Gas are Unreasonable. Decision of the CALIFORNIA RAILROAD COMMISSION, Fixing Rates, June 30, 1914.

315.1—Going Value.

"The question of what constitutes 'Going Value' is largely a matter of opinion and the only evidence aside from the highly theoretical assumption by the engineers for the defendant appears to be that no depreciation reserve has been set up to provide for the ultimate replacement of each element of physical property at the end of its useful life.

"On a strict reproduction theory, it is difficult to understand how the question of past deficits can be considered or why, if such deficits actually occurred and if, contrary to the usual practice with small companies such as the predecessors of defendant, they were not occasioned by the investment of surplus earnings in plant the present owners should be reimbursed for losses borne by former owners of the property. At any event, it is not clear to me how early losses can add to the present value of this or any other plant. The whole trouble in this and many other cases before the Commission, is that engineers representing utilities will not be consistent. Because a property has lost money certainly does not make it more valuable, although it of course makes it more costly and the only theory upon which losses could be considered at all in rate fixing is on the theory that cost should be the basis upon which rates should be determined;

and the justification for the cost basis for fixing rates is found in the fact that when any one incurs an expense for another, he has a right to expect to be reimbursed. In short, considerations of equity are the only ones that should appeal to a governmental agency in endeavoring to determine a basis upon which an earning shall be allowed. This Commission should always be ready to give consideration to every equitable claim of a utility, whether it could be forced to do so under a strict interpretation of the law or not. And on the other hand it certainly is a peculiar attitude to assume by any one who desires to give or receive fair treatment, to say that considerations of equity must be controlling upon this Commission in fixing rates when such equity is in favor of the utility, but that no account should be taken nor consideration given to equity when such a procedure would tend in anywise to decrease the amount upon which an earning is desired to be made.

"It should be understood by utilities and the public alike, and recognized by commissions and courts, that when you take away from an enterprise the right to determine for whom and for what price it will conduct its business, you have eliminated the possibility of applying the same rules of value as obtained in an unregulated enterprise. Value, as commercially understood, is something which can not be determined until after the earning power is determined, and the fact upon which commissions are asked to find, when asked to find value as commercially understood, is a fact which finally has no existence until after the authority of the State has been exercised in determining the proper conditions upon which the business shall be conducted, the proper rates, and so the earning power. The sooner it is understood by the utilities that under modern conditions they are literally at the mercy of the State, the sooner they will realize that only equitable considerations are the ones that will finally have weight, and until commissions and courts representing the sovereignty of the State realize that always they should make the 'ought' determine the 'must' such governmental agencies have not become equal to their task. I do not mean to suggest that any agency should be subject to the caprice of governmental authority, but I do insist that it should be recognized as a plain fact by the utilities that they are subject to regulation and that the character of such regulation and its extent will be largely determined by the attitude of the utilities themselves.

"It is inconceivable to me how any engineer or how any utility could expect public officials of any intelligence whatsoever to accept exaggerated so-called 'values' such as the one here presented, wherein every principle of consistency is violated and every known method of loading resorted to in order to increase the amount upon which an earning shall be expected. If as widely divergent results can be reached by competent engineers dealing with the same subject-matter, as have been reached, then the most that can be said is that the value of engineering aid to rate fixing is much overestimated, or that one or the other engineers, where such widely different results

are obtained is mentally dishonest. I do not mean by this a reflection upon Mr. Woodbridge, the engineer who made the physical appraisal in this case, but my reflection is upon the method and those responsible for it. What the Commission would like to know is the sum of money upon which it ought to allow an earning in any case and it will serve no good purpose and will be merely a waste of time for utilities to present an exaggerated statement with the hope that this Commission may follow a practice, too prevalent in the past, of splitting the difference between such estimate and some other which is perhaps lower. This Commission, however, should have no desire whatsoever in the matter, either that the basis for rate fixing be large or small. It should merely desire the facts and when theories must be applied to facts, only those theories which give to the utility and the patrons what ought to be accorded should be followed."

NEW YORK (1st D.)

221.1—Issue of Stocks and Bonds.

Application of the DRY DOCK, EAST BROADWAY AND BATTERY RAILROAD COMPANY, For Authority to issue Refunding Bonds. Decision of the NEW YORK PUBLIC SERVICE COMMISSION (1st D), Denying the Application. March 3, 1914.

The Company asked to be allowed to issue bonds for the purpose of refunding certain obligations. The majority opinion prepared by Commissioner Maltbie after discussing the case at length denies the application. The following is an extract from the summary contained in this opinion.

"Briefly stated, the applicants ask to be allowed to readjust their indebtedness (practically to reorganize) without proof that the new or old debts represent property of equal value or cost. They have not proved that the obligations to be refunded were for capital purposes, that no obligations were incurred to pay for replacements, or that all withdrawals have properly been credited to capital account. They disregard these points and hold that the Commission ought not to investigate and ascertain the facts. They practically declare that the existence of a real obligation gives them the right to capitalize it, regardless of its character or the purpose for which it was incurred. They argue that it is immaterial and that it does not concern the Commission whether the company will earn interest on the proposed issue of bonds or not.

"In my opinion, it is not only the power but the duty of the Commission before approving the proposed issue of bonds—

(1) To ascertain the purposes for which the funds obtained from the obligations to be refunded were used.

(2) To determine whether all represented permanent improvements of the plant, or renewals and replacements of obsolete or worn-out property.

(3) To ascertain whether all withdrawn, replaced and abandoned property has been credited to capital account at the figure at which it was entered in that account.

(4) To segregate all expenditures for maintenance, renewals and replacements and the cost of all withdrawals, and to permit the capitalization of only such expenditures as represent permanent improvements to the net amount.

(5) To restrict the amount of bonds to a figure upon which the company will with reasonable certainty earn interest.

"At present the Commission has no data in the record, which could be said to warrant the statement that the proposed refunding scheme is lawful or that no part should be charged to operating expenses or income. . . ."

"The application should either be denied or a thorough investigation instituted to ascertain if there are any facts which would throw a more favorable light upon the proposal. . . ."

The minority opinion prepared by Commissioner Williams points out that obligations which the company proposes to refund were incurred prior to the passage of the public utilities act and holds as follows:

"Clearly the Legislature sought to keep from the Act anything which might be construed to be retroactive in its effect and which might tend to unsettle the status of existing obligations.

"The enactment of the Public Service Commissions law was brought about primarily to put a stop to overcapitalization of Public Service Corporations. This overcapitalization was a well recognized fact; yet the securities were lawfully issued and in the hands of innocent holders for value, and in my opinion the framers of the Act meant just this: We will not attempt to interfere with obligations already issued, or with those approved by the Board of Railroad Commissioners, but not yet issued; neither will we interfere with the refunding of these obligations when they become due except to ascertain if the refunding is lawful and the amount necessary for that purpose, but all future issues of securities in the State of New York shall be limited to amounts properly chargeable to capital account and a certification to that effect must be procured from the Public Service Commission before such securities shall be issued.

"Neither do I believe that passing upon the application the Commission is authorized to go into the question of the physical value of the applicant's property at this time or at the time the obligations sought to be refunded were issued; neither do I believe that we should go into a systematic examination of the replacements and retirements. Otherwise, in effect, the Commission would be exercising the same

power with respect to securities lawfully issued before the enactment of the Public Service Commissions Law, that it has by law with respect to the new. . . ."

CALIFORNIA

300—Investment and Return.

THOMAS MONAHAN, AS MAYOR OF THE CITY OF SAN JOSE, v. SAN JOSE WATER COMPANY, Alleging That the Company's Rates for All Classes of Service Are Unjust and Unreasonable. Decision of the RAILROAD COMMISSION OF CALIFORNIA, Adjusting Rates. May 22, 1914.

The Commission made the usual valuation of the water utility's property and, in an opinion by Commissioner Eshleman, discusses the making of proper allowances for the company's water rights, for going value, and for paving over mains. Commenting upon the value found to be reasonable, the Commission says:

It should not be the desire of this Commission, as has often been said, to endeavor to scale down the properties of public utilities to the last dollar, rather the valuations should be liberal when proper economic theories are followed, and always this Commission should endeavor to bring about a result where any agency serving the public should have liberal payment for the sacrifices such agency has made. Neither should the Commission feel that it is its duty when it is dealing with a particularly prosperous utility to reduce it to such an extremity that it cannot properly perform its duty to the public. Prosperity on the part of the utilities is desirable from every standpoint, and a rate that will bring about such prosperity should always be imposed upon the public; and it is better to have a few cents more on the rate and produce a utility which is able to give good service to the public than to have the lowest rate which may possibly be justified and produce a utility which is continually striving to make both ends meet. This company has no bonded debt and in every way is prosperous, and the people of San Jose and this Commission alike should be pleased at this condition. . . .

NEW JERSEY

781—Adequacy.

Complaint of H. M. VOORHEES & BROTHER v. PUBLIC SERVICE ELECTRIC COMPANY. Asking that the Company be Required to Furnish Direct Current for Elevator Service. Decision of the NEW JERSEY BOARD OF PUBLIC UTILITY COMMISSIONERS, Dismissing the Application. July 21, 1914.

The company offered to furnish two phase alternating current to the complainant for elevator service instead of the direct current service applied for. It appears that a number of customers are supplied with

direct current service but that the company desires to discontinue such service and furnish only alternating current for all elevator service. The Commission says:

"It is unquestionably the duty of an electric company engaged in the supplying of electricity to furnish service to all who demand it, except competitors. But it is not under obligation to supply a particular and costly kind of service demanded by a proposed customer, if it is capable of furnishing another kind of service involving less expense, and suiting the purpose of such customer equally as well. The complainants do not stand in the same position as a person who has been a direct current customer and having invested in an equipment suitable for such current, is requested to change from one kind of service to another. Complaints of the latter character now pending before the Board are in the process of investigation and the conclusions in the present case can, of course, in no wise be taken as reflecting its views in any other case."

The Commission further concludes that there is very little if any, difference between the two currents in the smoothness and safety of operation and that while in general the cost of installation of alternating current elevator equipment is slightly higher than the cost of similar equipment for direct current service, the cost of maintenance of the former is likely to be less than the latter. The application was dismissed.

REFERENCES

RATES

623—Power Factor.

RATE FOR ELECTRICAL ENERGY, by G. DARRIEUS. *Electrical World*, 1-8 page, September 5, 1914, p. 484.

This is an abstract of an article published in *La Revue Electricien* of July 17, 1914, on the proposal of Riccardo Arno to charge not only for the real power, but also to make a certain charge for the "wattless power."

611—Light.

THE COST OF LIGHTING. Editorial, *Electrical Review*, September 12, 1914, p. 506.

The increasing comparative importance of the original outlay for lighting, because of the decrease of running expenses due to greater lamp efficiency, is pointed out.

INVESTMENT AND RETURN

310—Valuation.

VALUATION OF PUBLIC SERVICE CORPORATIONS. VOLUME 2. SUPPLEMENT, 1914. By ROBERT H. WHITTEN. The Banks Law Publishing Co., New York, 1914. 645 pages, pp. 799-1443. \$5.50.

The theory and practice of valuation, as it has developed since the publication of Dr. Whitten's "Valuation of Public Service Corporations," in 1912, is treated.

The numerous court and commission decisions since that time are arranged, discussed and fully quoted or abstracted according to the method used in the earlier volume. The same chapter numbers and headings are retained and a cumulative index included.

310—Valuation.

REPORT ON THE FAIR VALUE OF THE PROPERTY OF THE KANSAS CITY ELECTRIC LIGHT COMPANY AND SUBSIDIARY COMPANIES OF KANSAS CITY, MISSOURI. 112 pages.

This is the report of Philip J. Kealy, the engineer for the company, in the Kansas City Electric Light Company case before the Missouri Commission.

310—Valuation.

REPORT ON THE CAPITAL ENTITLED TO RETURNS INVESTED IN PROPERTY OF THE HOUSTON LIGHTING AND POWER COMPANY, OF HOUSTON, TEXAS. 1905. By JAMES E. ALLISON AND COMPANY, St. Louis. 315 pages.

This is the report of the engineers for the company on the value of the property of the Houston Lighting and Power Company. In connection with an analysis of the report of Lyndon and Elrod, the engineers for the city, various mooted principles of valuation are discussed at length. Citations from the decisions of courts and commissions are included.

395—Proceedings of Technical Associations.

NEW ENGLAND SECTION OF THE NATIONAL ELECTRIC LIGHT ASSOCIATION. SIXTH ANNUAL CONVENTION AT NARRAGANSETT PIER, R. I., September 2, 3, 4. *Electrical Review*, 6 pages, September 12, 1914, p. 530. *Electrical World*, 2 pages, September 12, 1914, p. 506.

Abstracts of the papers read at this convention and the discussion of them is given.

395—Proceedings of Technical Associations.

COLORADO ELECTRIC LIGHT, POWER AND RAILWAY ASSOCIATION. *Electrical Review*, 2 1-3 pages, September 12, 1914, p. 536. *Electrical World*, 1 page, September 12, 1914, p. 508.

An account is given of the annual convention of the Colorado Association, September 3-5. Brief abstracts are included of the papers which were read.

340—Rate of Return.

SOME NEGLECTED PHASES OF RATE REGULATION. FLUCTUATING PRICES AND THE EARNINGS OF CAPITAL, by J. MAURICE CLARK. *American Economic Review*, 10 pages, September 1914, p. 564.

The author contends first, that if the depreciation of gold continues, it will probably call for higher rates of income on investments, including those in quasi-public industry, than the returns to which we have become accustomed. But if prices are to fall steadily from now on, all industries may be able to borrow more cheaply than at present, and the "reasonable return" in public service industries may be lower than at present. Second, if betterments made out of earnings are entitled to future dividends at the current rate, the amount of such betterments should be counted exactly as if they were cash dividends for purposes of regulation of charges, but if this is done, it will be public policy to allow a higher total return than that which we are accustomed to consider reasonable. Third,

if earnings are to be allowed on such betterments, it becomes advisable to see to it that they are expended with reasonable economy and for purposes whose public importance justifies the outlay, with at least as much care as we spend in safeguarding the expenditure of funds raised by the issue of new securities.

PUBLIC SERVICE REGULATION

200—Public Service Regulation.

HOW, WHEN AND WHERE—A FEW IRREGULAR THOUGHTS ON REGULATION, by JOHN S. BLEECKER. Read before the Southeastern Section, National Electric Light Association, at its Second Annual Convention, August 19–21, 1914. 10 pages.

Various phases of public service regulation are touched upon. It is said that the real object of regulation is to solve the public utility equation—namely, Rates, Service, and Rate of Return on Investment. Rates shall be high enough to insure to the consumer that reasonable service which will encourage the use of the commodity by him, and at the same time be high enough to afford a fair return upon the investment, so that additional capital will be freely attracted to the enterprise to keep pace with the growth of the business, provided, always, that the rate is not higher than the service is reasonably worth. The Georgia Commission is quoted to the effect that “one of the most serious objections that has been urged to the regulation of public utilities by commission is that, if the same rate of return on the capital invested is allowed to all companies, it removes in many cases all incentive to the responsible officers of utility companies for enterprise, hard work and economy, and that, in consequence, both the public and the stockholders are losers and great injury is done the industries.”

221—Capitalization.

PUBLIC REGULATION OF RAILROAD ISSUES, by WILLIAM Z. RIPLEY. *The American Economic Review*, 24 pages, September, 1914, p. 541.

The regulation of capitalization by the states, especially New York, Massachusetts and Texas, is discussed. The policy of the New York Commissions is commended, especially as being wise and sane. It is said that the New York Commissions “apparently refrained from an unduly drastic policy in scaling down securities. Unlike Texas . . . the policy pursued did not seek to undo at one fell stroke a long course of financial excesses in the past. Nevertheless, a wholesome restraint and corrective was applied so far as practicable.” It is held that the experience of Massachusetts in seeking honest capitalization by law is significant in several respects. It reveals the possibility of too great strictness in financial regulation, or rather misplaced strictness in focusing attention upon the issue price rather than upon the provision in proper ways of an adequate supply of capital for the needs of the service. It also emphasizes the need of elasticity in procedure; not governing, that is to say, through rigid statutory rules, but, after laying down the law in its general terms, giving play for the exercise of discretion in its application. Yet, while defective for a time in these respects, no impartial student can deny that the effect of this Massachusetts legislation has on the whole been salutary. The statement is made that the course of events in recent years, despite the activity of the several states in regulating capitalization, has emphasized the need of legislation in this field by the federal government. The desirability of an enlargement of the scope of authority of the Interstate Commerce Commission has been established through the well nigh intolerable conflict of authority of the many public service commissions and state courts now at work in this field. No fewer than six different state commissions are said to be taking a hand in the pending reorganization of the Wabash. The approval of each is necessary for validation of the plans, and it is impossible to obey so many masters. It is also daily becoming more clear that the conflict of state and federal authority in the regulation of rates can be averted only by

the assumption of unified financial control by the United States. Rates, service and finance are so completely interlocked that satisfactory regulation in each field cannot be exercised except by the assumption of full authority over all three domains alike.

200—Public Service Regulation.

REGULATION OF PUBLIC SERVICE COMPANIES IN GREAT BRITAIN, by ROBERT H. WHITTEN. REVIEW, by JAMES E. ALLISON. *American Economic Review*, 1½ pages, September, 1914, p. 652.

An interesting review of Dr. Whitten's book is given. In the discussion of Chapters 7-12, it is said that probably the most interesting condition of utility regulation in Great Britain, as compared with regulation in the United States, is that the British system tends to regulate dividends and profits directly and rates indirectly through the dividends, while in the United States our public service commissions tend to regulate rates directly and dividends indirectly through rates. With the sliding scale as established for some British gas companies, if dividends go up, rates must come down. This leaves a considerable field for the exercise of good management accruing to the benefit of the companies. Under the sliding scale system this incentive for good management is recognized and is a stable element in the regulation. In the United States, where rates are regulated directly, but supposedly based upon a calculated rate of return, the incentive for good management remains only in the fact that the rates may not result in the rates of return attempted to be established and in the fact that rates are regulated only at intervals. It is evident that the American method is much less stable than that established in Great Britain.

200—Public Service Regulation.

POLICIES OF REGULATING BODIES, by EDWIN GRUHL. *Aera*, 11 pages, September, 1914, p. 113.

This is the second and concluding part of Mr. Gruhl's paper dealing with the tendency toward uniformity of the policies of regulating commissions (see 5 RATE RESEARCH 332). The questions of value in purchase cases, issue of securities, certificates of convenience and necessity, cost of service and rates, and service, are considered here.

MUNICIPALITIES

830—Public or Municipal Ownership.

MUNICIPAL OWNERSHIP IN LONDON. Editorial, *Electric Railway Journal*, September 5, 1914, p. 416.

Attention is called to the deficit shown in the operation report of the London County Council Tramways and to the fact that most of the blame for this is put upon the power of motor bus competition. The *London Engineer* is quoted to the effect that "had the tramways been run from the first as a business concern by business men, the present position would never have been reached. The Highways Committee forgets, in complaining about motor omnibus competition that the tramways, when first introduced, affected the incomes of certain railroads. One railroad very successfully met competition by electrification and business economy." It is said that it is true that business principles and scientific management are not and never have been innate or even acquired attributes of government ownership. But if the difficulties are not due to faulty direction, but to conditions which could not have been foreseen, they present an equally strong argument against municipal ownership. The electric railway business presents many hazards, some of which may be escaped by good management and some may not. Certainly these hazards are greatly increased by municipal owner-

ship, while the opportunities for escaping those which are common to both public and private ownership are greatly lessened when the city operates the railways. The only safe plan is for the municipality to refrain from all commercial undertakings possible. The funds which a city can invest in enterprises of this kind are essentially "trust funds," and it should be as careful of exposing them to the hazards of ordinary business as are the administrators of other trust funds. When to this argument is added the demonstrated fact that a municipal enterprise cannot be conducted as efficiently as one under private direction, the inadvisability of municipal operation of electric railway systems is evident.

830—Public Ownership.

SEATTLE STEAM HEAT SITUATION. Editorial, *Journal of Electricity, Power and Gas*, September 5, 1914, p. 230.

The action of certain members of the Seattle City Council asking that the corporation counsel advise as to what legal steps may be taken to stop the aggressive competition of the private lighting company in the furnishing of steam heating, is discussed. The alleged refusal of the lighting company to supply steam heat service to consumers unless they agree to purchase their electrical energy requirements from the company and agree to compel their tenants of the same building to do likewise, is commented upon. It is pointed out that the city is apparently realizing the advantage of controlled monopolistic as compared with competitive public utilities service. The city is seemingly the first to recognize the absurdity of the situation when the competitive conditions for any reason are made too uncomfortable.

GENERAL

920—Economy and Efficiency.

ECONOMY IN HANDLING PEAK LOADS, by REGINALD TRAUTSCHOLD. *Electrical World*, 3 pages, September 12, 1914, p. 516.

The selection of prime-mover units for best operating results under various conditions of station load and available fuel supply, is considered. Tables are given showing fixed charges and total cost of operation of 1500-kilowatt steam, steam and natural-gas, steam and oil-engine, and steam and producer-gas plants.

910—Promotion and Growth of the Business.

RURAL ELECTRIC SERVICE IN CENTRAL INDIANA. *Electrical World*, 2½ pages, September 12, 1914, p. 522.

The plan whereby the Indiana Railways and Light Company is building up rural electric business, is outlined. A minimum of five customers is required for each mile of new extension. The cost of the line complete is guaranteed not to exceed \$300 a mile, the company agreeing to pay all additional expense over and above this amount. Each customer must promise to pay his proportion of the cost of the line immediately upon its completion. The company collects no charges for electricity from any customer until his interest in the line is repaid in full; or, in other words, the company first earns the value of the line in service rendered to the customer, before any energy charges are made. In case other customers wish connections before the line is fully earned by the company, each is required to pay his proportion to the charter members before service will be rendered. Any customer desiring to use a motor of 1 horse-power rating or larger is counted as two customers, but is required to pay only as one customer. If, for example, six customers have signed contracts within a distance of a mile and one of these customers desires to use a 1 horse-power motor, the basis of settlement will be seven customers per mile or \$43 each. Rates for service are 12 cents a kilowatt hour, subject to a 10 per cent discount for prompt payment, with a minimum of

\$1.00 a month for all except customers who have motors of 1 horse-power rating or larger. In the latter case the regular motor rate of 5 cents per kilowatt-hour prevails, with a minimum of \$1.00 per horse-power per month.

770—Safety of Service.

SAFETY RULES TO BE OBSERVED IN THE OPERATION AND MAINTENANCE OF ELECTRICAL EQUIPMENT AND LINES. CIRCULAR OF THE BUREAU OF STANDARDS. No. 49. Pamphlet, 50 pages.

This gives the result of a year's study by the Bureau of Standards of safety rules to govern the operating practice of employers and employes on electrical work. The rules apply to the operation of and work on or about power and signal lines, the electrical equipment of central stations, sub-stations, private plants, electrical tests and tunnel, subway or similar underground work. General rules are addressed to the employer and to the employes, followed by those rules under separate headings which refer to special classes of employes.

781.5—Inductive Interference.

REPORT BY THE JOINT COMMITTEE ON INDUCTIVE INTERFERENCE TO THE RAILROAD COMMISSION OF THE STATE OF CALIFORNIA. *Proceedings of the A. I. E. E.*, 47 pages, September, 1914, p. 1311.

A report of the committee's work to date is given, together with provisional rules which tend to improve conditions in respect to inductive interference. While the committee's investigation is not complete, it recommends unanimously that these rules be made effective immediately, without waiting for the completion of the investigation.

199—General History of Related Utilities.

TELEPHONES AND TELEGRAPHS, 1912. Bulletin 123, Bureau of the Census. Pamphlet, 26 pages.

A series of tables presenting the principal data in regard to telephones and telegraphs, to be published as a bulletin for the census of these industries which covered the calendar year 1912, is given.

920—Economy and Efficiency.

REPRESENTATIVE UNDERWOOD ON HYDRO-ELECTRIC DEVELOPMENT. Article and Editorial, *Stone and Webster*, 8½ pages, September, 1914, p. 213 and p. 170.

The speech delivered by Representative Oscar W. Underwood on the Adamson Bill, is characterized as one of the most masterly contributions ever made to the discussion of the question of hydro-electric development in this country. Mr. Underwood says that only by regulated monopoly, and not by competition and duplication, can the best services and the lowest rates be secured. He adds that not a single joint improvement of navigation and development of water power by private enterprises in a single navigable stream in this country is under construction at this time. So-called new principles, exploited by those who have made a political foot ball of their so-called conservation policies, have succeeded in putting a stop to all joint improvements by legislative obstacles. The bill under discussion undoubtedly protects the rights of the public, he says. But his fear is that it does not hold out sufficient inducements to capital to encourage investment in such enterprises. He is opposed to a tax on the use of water in navigable streams for power purposes. The best reason why no charge should be made and no tax be levied is that the people are entitled to as cheap electric power as it is possible to give them, whether it is used in their homes for light and heat, or in the factories for manufacturing. The paper includes a discussion of various industries, dependent upon cheap electric power, which have been driven to other countries, because of the more favorable water power rights granted.

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